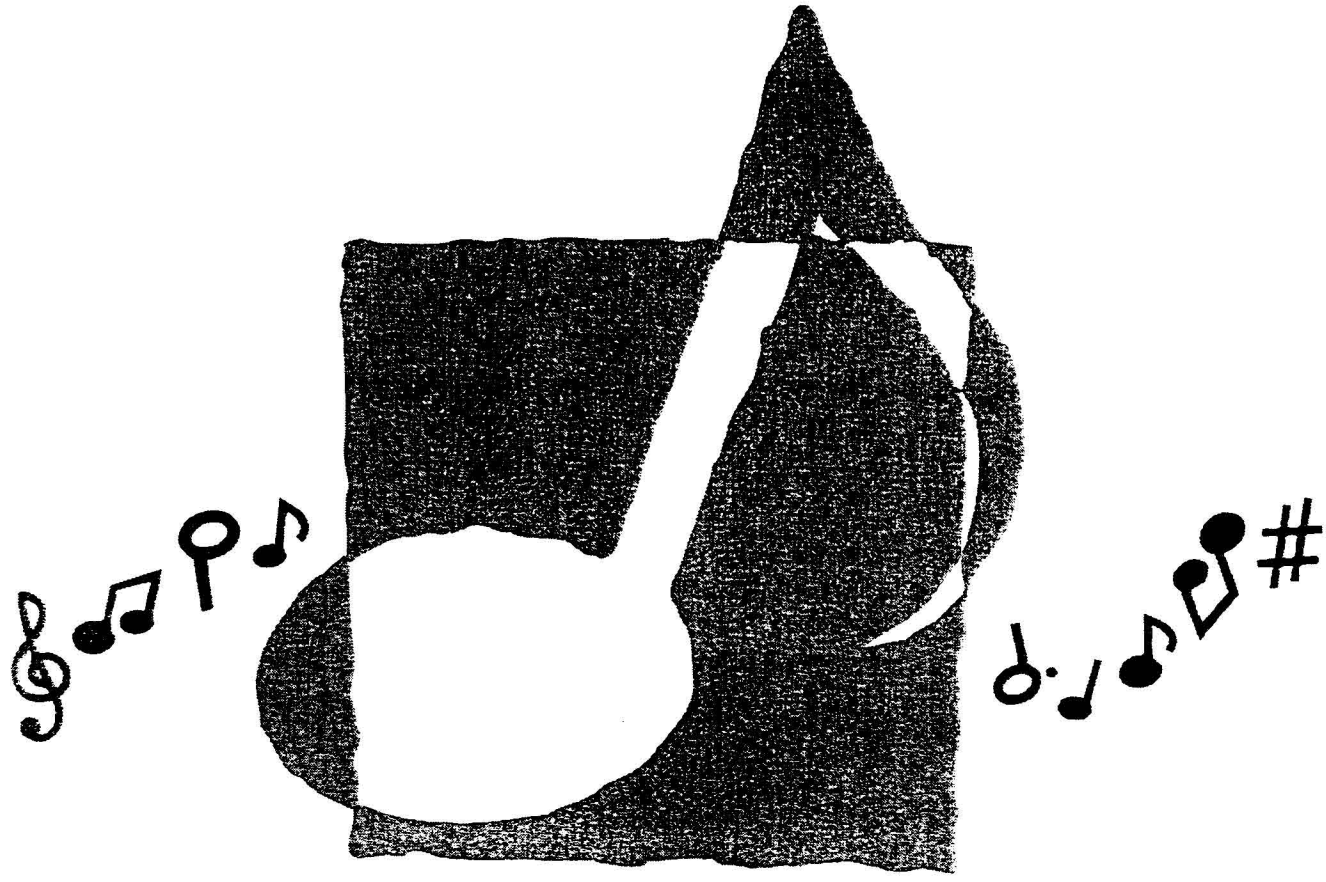
CELVIANO

AP-22S/AP-40

USER'S GUIDE
GUÍA DEL USUARIO



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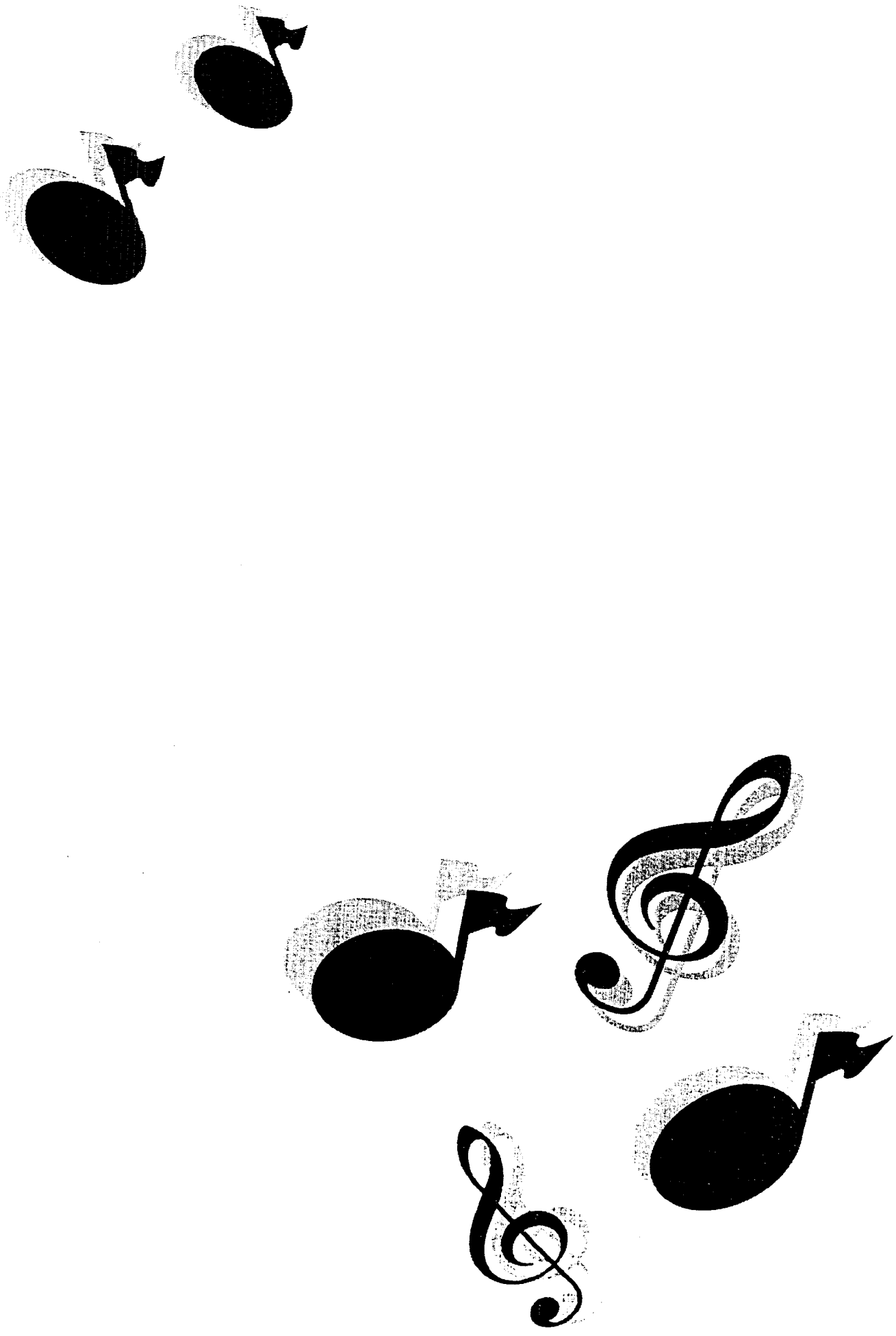
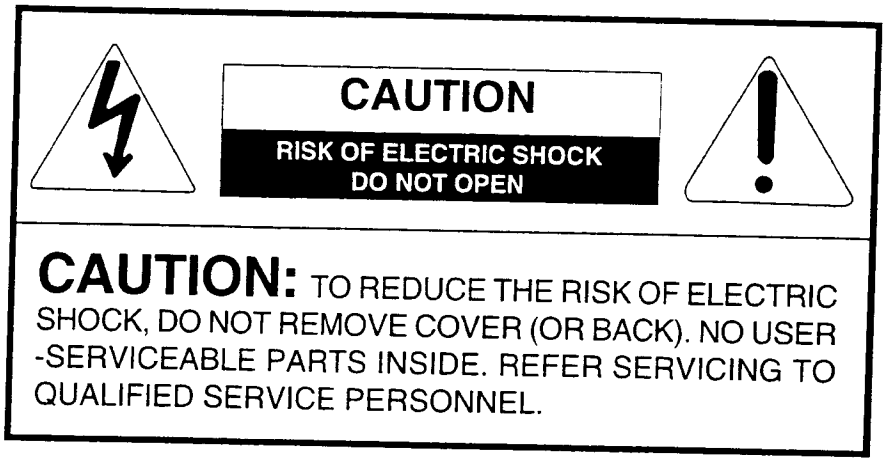
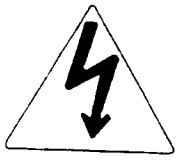


Introduction

Congratulations on your selection of CASIO's Digital Piano. This piano is a sophisticated musical instrument that blends the very best of traditional piano feel and sound quality with the latest that modern electronics technology has to offer.
Before using the instrument, be sure to carefully read through this instructions contained in this manual.

Please keep all information for future reference.


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER -SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

CE

CASIO ELECTRONICS CO., LTD.
Unit 6, 1000
North Circular Road
London NW2 7JD, U.K.

This mark is valid in the EU countries only.
Please keep all information for future reference.

IMPORTANT SAFETY INSTRUCTIONS

"INSTRUCTIONS PERTAINING TO A RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS"

WARNING – When using electric products, basic precautions should always be followed, including the following:

1. Read all the instructions before using the products.
2. To reduce the risk of injury, close supervision is necessary when a product is used near children.
3. Do not use this product near water – for example, near a bathtub, washbowl, kitchen sink, in a wet basement, or near a swimming pool, or the like.
4. This product should be used only with a stand that is recommended by the manufacturer.
5. This product, either alone or in combination with an amplifier and headphones or speakers, may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at a high volume level or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should consult an audiologist.
6. The product should be located so that its location or position does not interfere with its proper ventilation.
7. The product should be located away from heat sources such as radiators, heat registers, or other products that produce heat.
8. The product should be connected to a power supply only of the type described in the operating instructions or as marked on the product.
9. This product may be equipped with a polarized line plug. This is a safety feature. If you are unable to insert the plug into the outlet, contact an electrician to replace your obsolete outlet. Do not defeat the safety purpose of the plug.
10. Unplug this apparatus during lightning storms or when unused for long periods of time.
11. Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
12. The product should be serviced by qualified service personnel when:
    A. The power - supply cord or the plug has been damaged; or
    B Objects have fallen, or liquid has been spilled into the product; or
    C. The product has been exposed to rain; or
    D. The product does not appear to operate normally or exhibits a marked change in performance; or
    E. The product has been dropped, or the enclosure damaged.
13. Do not attempt to service the product beyond that described in the user - maintenance instructions. All other servicing should be referred to qualified service personnel.
14. Clean only with a damp cloth.
15. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

SAVE THESE INSTRUCTIONS

GROUNDING INSTRUCTIONS

This product must be grounded. If it should malfunction or break down, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This product is equipped with a cord having an equipment - grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

DANGER – Improper connection of the equipment - grounding conductor can result in risk of electric shock. Check with a qualified electrician or serviceman if you are in doubt as to whether the product is properly grounded. Do not modify the plug provided with the product – if it will not fit the outlet, have a proper outlet installed by a qualified electrician.

NOTICE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC WARNING

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

Safety Precautions

Symbols

Various symbols are used in this operating manual and on the product itself to ensure that the product is used safely and correctly, and to prevent injury to the user and other persons as well as damage to property. Those symbols along with their meanings are shown below.

⚠ WARNING

This indication stipulates matters that have the risk of causing death or serious injury if the product is operated incorrectly while ignoring this indication.

⚠ CAUTION

This indication stipulates matters that have the risk of causing injury as well as matters for which there is the likelihood of occurrence of physical damage if the product is operated incorrectly while ignoring this indication.

Symbol Examples

This triangle symbol (△) means that the user should be careful. (The example at left indicates electrical shock caution.)

This circle with a line through it (⃠) means that the indicated action must not be performed. Indications within or nearby this symbol are specifically prohibited. (The example at left indicates that disassembly is prohibited.)

The black dot (●) means that the indicated action must be performed. Indications within this symbol are actions that are specifically instructed to be performed. (The example at left indicates that the power plug must be unplugged from the electrical socket.)

⚠ WARNING

Do not locate the instrument or its stand on an uneven or unstable surface.

- Locating the instrument or its stand on an uneven or unstable surface can cause it to fall, creating the danger of personal injury. When using the stand that comes with the unit, be sure that all screws are securely tightened.

Power source and voltage.

- Make sure that the power source you are using matches the rating marked on the unit itself. Improper power can create the danger of fire or serious electrical shock.

Do not place containers containing water or other liquids on the instrument.

- Do not place the following objects on the instrument. Placing such objects on the instrument may cause fire or electrical shock if they spill and get inside the instrument.
  - * Containers filled with water or other liquids (including vases, potted plants, cups, cosmetics and medicines)
  - * Small metal objects (including hairpins, sewing needles and coins)
  - * Flammable objects

In the event a foreign object should happen to get inside the instrument, take the following actions:

1. Turn power off.
2. Unplug the power cord from the wall outlet.
3. Consult with the dealer where you purchased the piano or with an authorized CASIO service provider.

Do not disassemble or modify the instrument.

- Never attempt of take apart or modify the instrument, its accessories, or separately sold options. Doing so can cause fire, electrical shock or malfunction. Consult your dealer concerning all inspection, adjustment or repair of internal components.

Power cord handling.

- Never try to modify the electrical cord, and avoid letting it become damaged or broken. Placing heavy objects on it, exposing it to high heat, and pulling on it can cause the electrical cord to become damaged, and create the danger of fire or serious electrical shock.
- If the electrical cord becomes damaged, request chargeable replacement from your retailer or an authorized service provider.

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Do not use if there is an abnormality or malfunction.

- Do not use the instrument if there appear to be abnormalities such as the presence of smoke or abnormal odor. Also do not use the instrument if there appear to be malfunctions such as the power not coming on or sound not being produced. Use under such conditions can cause fire or electrical shock. In such cases, take the following actions immediately. Never attempt to repair the instrument yourself.
  1. Turn power off.
  2. Unplug the power cord from the wall outlet.
  3. Consult with the dealer where you purchased the piano or with an authorized CASIO service provider.

When the instrument has been dropped.

- Take the following actions whenever the instrument has been dropped or damaged. Continued use can create the danger of fire or electrical shock.
  1. Turn power off.
  2. Unplug the power cord from the wall outlet.
  3. Consult with the dealer where you purchased the piano or with an authorized CASIO service provider.

Opening and closing the keyboard cover.

- Make sure the keyboard cover is fully open when using the unit. To close the cover, hold it with your hand and gently lower it into place. Take care to avoid injury to your fingers when opening and closing the cover.

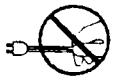
Be careful of the bags around children.

- Never allow anyone to place the plastic bags of the instrument, its accessories, and its separately sold options over their heads. Doing so can cause suffocation. Particular caution is required in homes with small children.

⚠ CAUTION

Power cord and plug

- Keep the power cord away from heaters. Heat can melt the insulation of the power cord, creating the danger of fire or electrical shock.
- Grasp the plug when unplugging the power cord. Pulling on the cord itself can damage it, creating the danger of fire or electrical shock.
- Do not touch the unit or plug with wet hands. Doing so creates the danger of electrical shock.
- Unplug the unit whenever leaving the unit unattended or when you do not intend to use it for a long period.
- Use only the electrical cord that comes with the unit. Use of another type of power cord can cause its insulation to melt or otherwise damage the cord, creating the danger of fire or electrical shock.



When moving the unit.

- Take the following actions before moving the unit. Remember that damage to the power cord can create the danger of fire or electrical shock.
  1. Unplug the power cord.
  2. Disconnect the pedal cable and other connecting cables.

Cleaning and caring for the unit.

- Unplug the power cord before cleaning or performing any other care on the unit.

Location

- Never locate the instrument in areas subject to high humidity or heavy accumulation of dust. Doing so can cause fire or electrical shock.
- Never locate the instrument in areas subject to grease splatters or steam, such as in a kitchen or near a humidifier. Doing so can cause fire or electrical shock.
- The instrument's silicone rubber feet can eventually blacken or scar lacquered surfaces. Use felt cloth pads to insulate the feet.

Do not stand on the unit or its stand.

- Do not stand on the unit or its stand. Be especially careful to keep an eye on young children. Standing on the piano can damage it or knock it over, creating the danger of personal injury.

Keep heavy objects off.

- Keep heavy objects off of the unit. They can knock the unit over which can damage it or cause it to malfunction.

Volume Setting

- Avoid setting the volume too high when using this unit alone or in combination with headphones, an amplifier, external speakers, or other equipment.
  Using a very high volume setting for extended periods can cause damage to your hearing. Whenever you notice trouble with hearing or ringing in the ears, contact a physician as soon as possible.

About the stand.

- Keep the butterfly bolts that anchor the unit to the stand securely tightened. Dropping the unit can damage it or cause it to malfunction. When placing the unit onto the stand, be careful that you do not pinch your hand between the unit and stand. The unit is quite heavy, so it should be moved or placed on the stand by at least two people.
- Changes in temperature and humidity can cause stand screws to become loose. This means you should occasionally check the tightness of all screws. Retighten loose screws as soon as you discover them. Dropping the unit can result in injury.

Operational Precautions

Locating the Unit

Avoid the following locations.
- Areas exposed to direct sunlight and high humidity.
- Areas subjected to very low temperatures.
- Near a radio, TV, video deck, or tuner (unit can cause interference with audio or video signals)

Care of the Unit

- Never use benzene, alcohol, thinner or other such chemicals to clean the exterior of the unit.
- To clean the keyboard, use a soft cloth dampened with a weak solution of a mild neutral detergent and water. Wring out all excess moisture from the cloth before wiping.
- Severe impact can cause problems.
  When transporting the piano, use soft cloth to pack around the keyboard and buttons to protect them against damage.
- Never try to repair or modify any part of the piano.
  Any attempt to repair or modify the piano can cause problems with operation.
- Avoid using this piano near televisions, radios, etc.
  Because this piano uses digital circuitry, it may cause interference with other electronic devices such as televisions, radios, etc.
- In case of a problem, check that buttons and connections are correct, as indicated in this manual. If the piano still does not work properly, contact your retailer or a nearby dealer. Never try to repair the piano yourself.

Lithium Battery

This unit is equipped with a lithium battery to provide power needed to retain memory contents while unit power is turned off. Should the lithium battery go dead, all memory contents will be lost whenever you turn unit power off. The normal life of the lithium battery is five years from the time that the battery was installed. Be sure to periodically contact your retailer or authorized service provider to have the lithium battery replaced. Note that you will be charged separately for lithium battery replacement.

- Note that CASIO COMPUTER CO., LTD. shall not be held liable for any damages or losses or any claims by third parties arising from corruption or loss of data caused by malfunction or repair of the unit, or from battery replacement.

You may notice lines in the finish of the case of this piano. These lines are the result of the molding process used to shape the plastic of the case. They are not cracks or breaks in the plastic, and are no cause for concern.

NOTES

- Unauthorized reproduction of this manual in its entirety or in part is expressly forbidden. All rights reserved.
- CASIO COMPUTER CO., LTD. shall not be held liable for any damages or losses or any claims by third parties arising from use of this product or this manual.
- The contents of this manual are subject to change without notice.

Main Features

■ 10 versatile tones

- Eight instrument tones including piano and pipe organ plus two bass tones (wood bass, electric bass) provide plenty of performance versatility. Keyboard split capabilities even let you assign a bass tone to the lower range (left side) of the keyboard and an instrument tone to the upper range (right side).
- An easy setting lets you control the brilliance of each tone, and a layer feature lets you assign two tones to sound simultaneously.
- Other features include digital effects that control the acoustical characteristic of tones, as well as three pedal effects for all the nuances of an acoustic piano.

■ Metronome

- A simple operation lets you set the tempo and the beat of the metronome to suit the tune you want to play. It's the perfect practice tool for players of all levels.

■ 8 demo tunes

- Eight demo tunes demonstrate how to use each of the built-in tones.

■ Memory

- Two independent memory areas let you separately record and playback tunes. You can record in one memory and later record in the other memory while playing back your original recording, or even play back from both memories at the same time.

■ Song Lesson

- Playback with any one of 80 built-in Song Lesson tunes. Right hand and left hand parts are separate, so you can turn off play of either hand and practice along on the keyboard (Part Lesson). Or you can select a particular phrase within a Song Lesson tune to repeat (Phrase Repeat).

■ Powerful keyboard setting functions

- A selection of powerful keyboard setting functions help you get create exactly the musical mood you want.
  Transpose adjusts the key of the keyboard in semitone steps.
  Tuning provides a means to tune with another musical instrument.
  Touch Select adjusts the intensity of the output sound in accordance with the amount of pressure you apply to the keyboard.

■ MIDI terminal

- Connecting to another MIDI musical instrument lets you play two instruments from the keyboard of your CELVIANO. You can also connect to a commercially available MIDI sequencer to increase the number of parts you can play.

434A-E-0010A

Contents

Introduction *E-1*

IMPORTANT SAFETY INSTRUCTIONS *E-2*

GROUNDING INSTRUCTIONS .. *E-3*

Safety Precautions *E-4*

Operational Precautions *E-7*

Main Features *E-8*

Contents *E-9*

General Guide *E-10*

Basic Operation *E-12*

Using Tones E-12
Using the Pedals E-14
Using the Metronome E-15

Using the Memory *E-16*

About the Memory E-16
Recording E-16
Playback E-17
Deleting Memory Contents E-17

Using Song Lesson *E-18*

Playing Back Song Lesson Tunes E-18
Practicing Individual Parts (Part Lesson) E-19
Repeating a Specific Phrase (Phrase Repeat) E-19
Phrase Linking with Phrase Repeat E-20

Using Demo Tunes *E-21*

Playing the Demo Tunes in Sequence E-21
Playing a Specific Demo Tune E-21
Stopping Demo Tune Play E-21

Keyboard Settings *E-22*

Using Touch Select E-22
Using Transpose E-22
Adjusting the Tuning of the Piano E-22
Temperament E-22
Using Baroque Pitch E-23

MIDI *E-24*

What is MIDI? E-24
What you can do with MIDI E-24
MIDI Connections E-24
MIDI Channels E-24
Simultaneous Receive Over Multiple Channels (Multi-Timbre) E-24
Setting the Basic Channel E-25
Using Multi-Channel E-25
Sending Memory Playback and Song Lesson Play Data E-26
Setting the Program Change Number Type ... E-26
Turning Local Control On and Off E-27
MIDI Data Notes E-27

Troubleshooting *E-29*

Connections *E-30*

Assembly Instructions *E-31*

Specifications *E-34*

Appendix *A-1*

Initial Power On Settings A-1
Note Table A-2
Song Lesson Tunes A-3

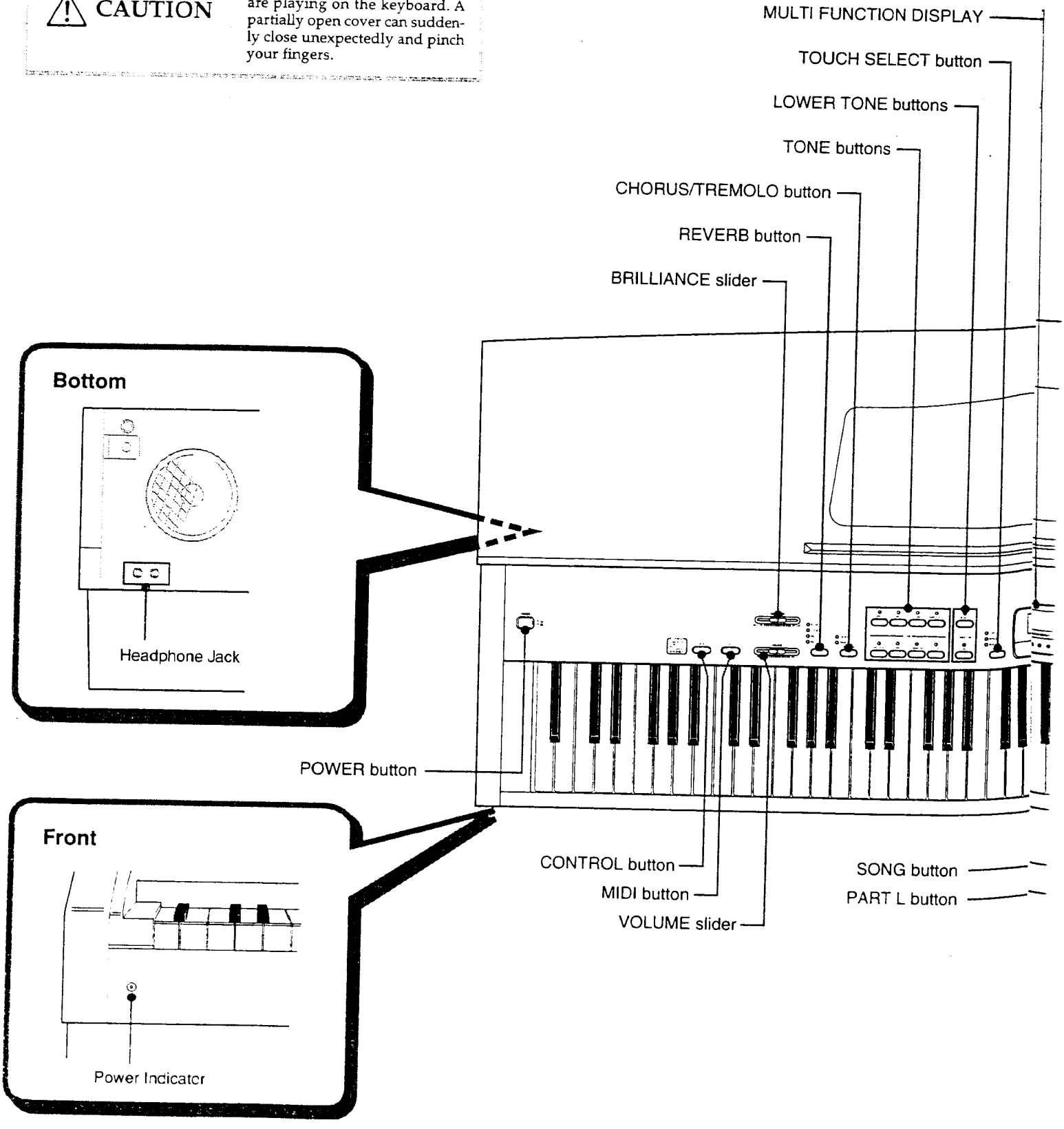
MIDI Implementation Chart

General Guide

- Key, button, and other names are indicated in the text of this manual using bold type.
- See page E-31 for details on the stand.

⚠ CAUTION

Make sure that the cover of the piano is fully open whenever you are playing on the keyboard. A partially open cover can suddenly close unexpectedly and pinch your fingers.



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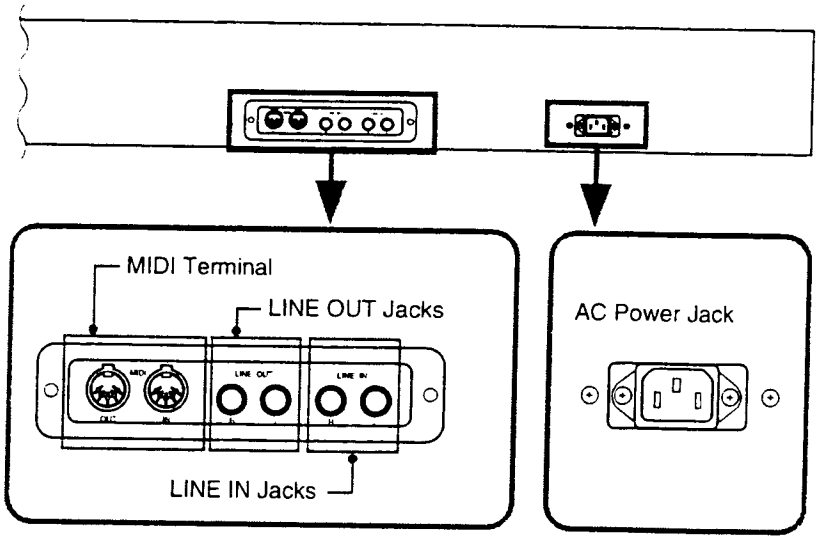
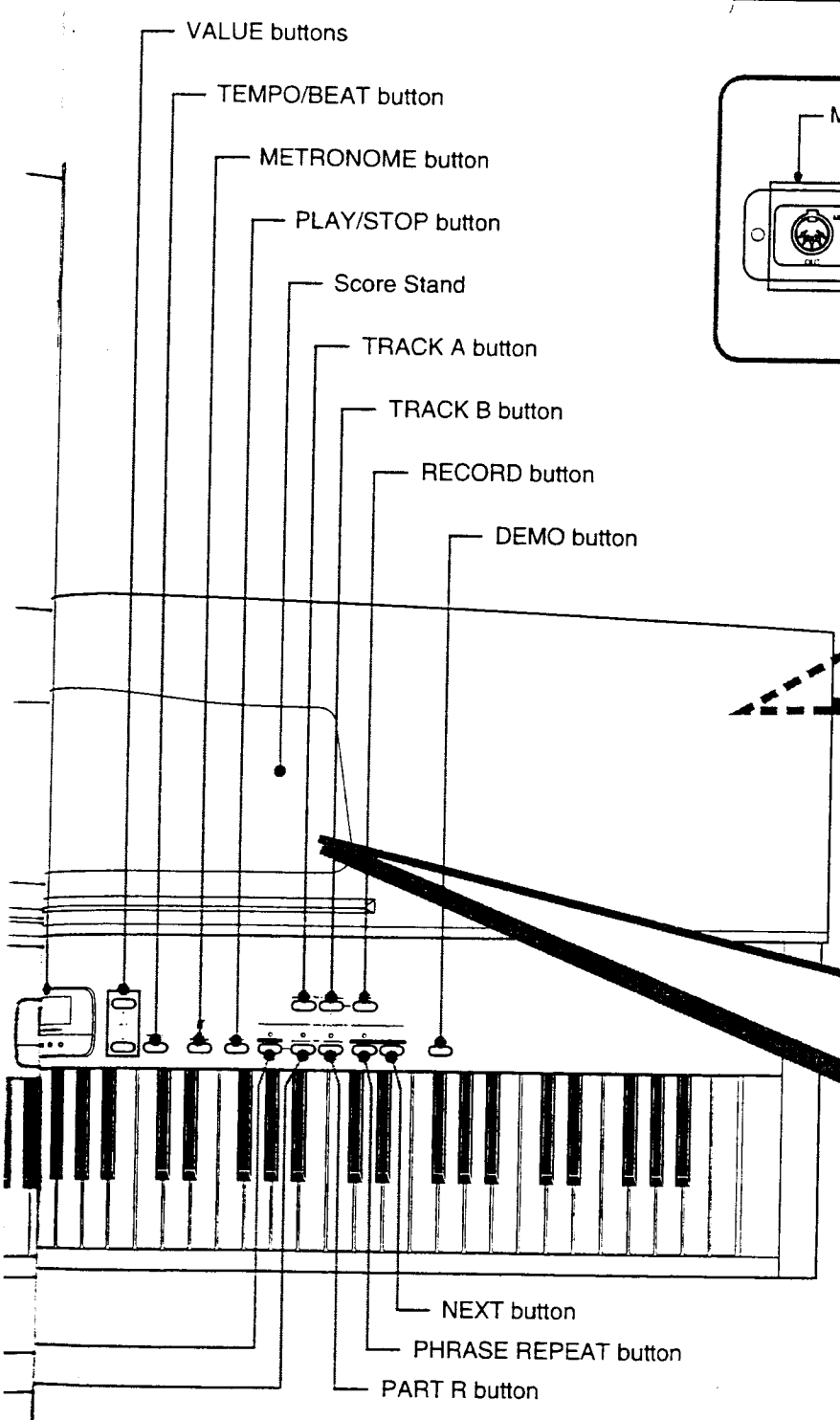
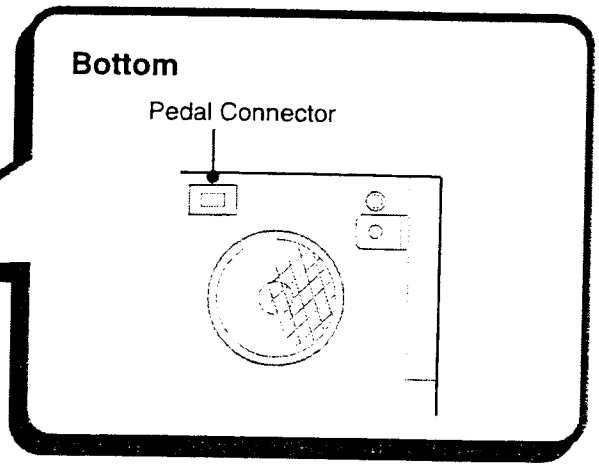
Back Panel



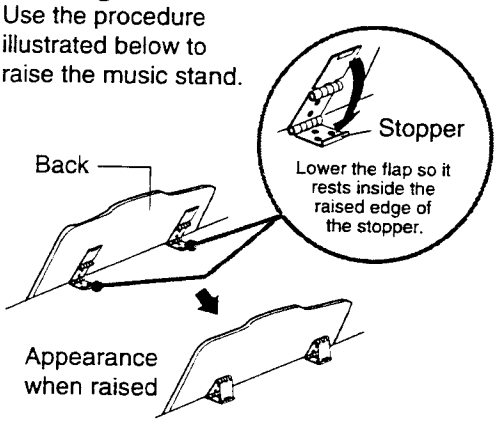


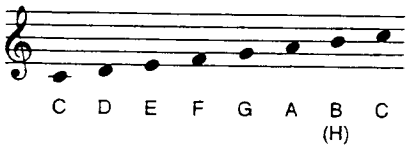
Bottom

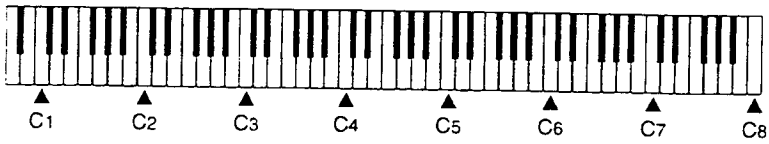


Raising the Score Stand

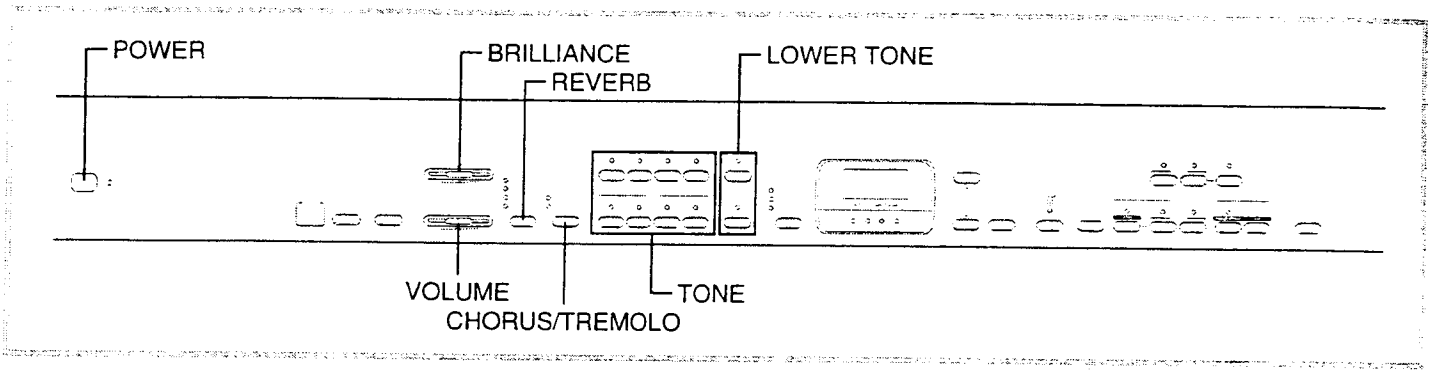
Use the procedure illustrated below to raise the music stand.



Note Names

A value next to a note name indicates the relative position of the note on the keyboard as shown below.



Basic Operation



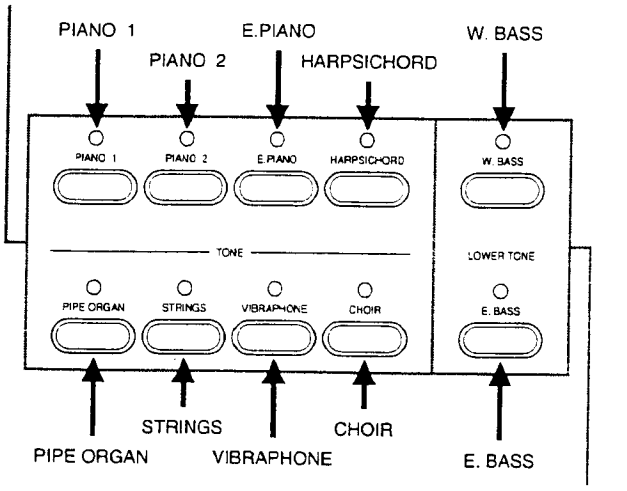
Using Tones

The following procedures describe everything you need to know about selecting and using tones.

Selecting a Tone

Your CELVIANO has a selection of 10 built-in tones.

TONE Buttons



LOWER TONE Buttons

- The eight tones that can be selected with the TONE buttons are for normal keyboard play. The PIANO 1 tone was recorded with stereo sampling.
- The two LOWER TONE button tones are always assigned to the lower range (left side) of the keyboard. This means bass tones can be played simultaneously with other (non-bass) tones.
- See "Using Bass Tones (Keyboard Split)" on this page for details on using bass tones.

To select a tone

1. Press **POWER** to turn on piano power.
2. Press one of the **TONE buttons** to select the tone you want.
3. Use the **VOLUME slider** to adjust the volume.
   - We recommend that you set the VOLUME slider one or two levels to the left of center at first.
   - Moving the slider towards MIN decreases volume, while moving it towards MAX increases volume.
4. Play something on the keyboard.
   - Adjust volume to the level you want as you play.
5. After you are finished playing, press **POWER** to turn off power.

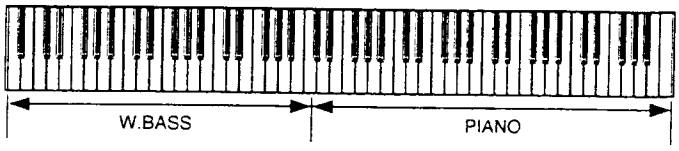
NOTE

The PIANO 1 tone is selected automatically whenever you turn on piano power.

Using Bass Tones (Keyboard Split)

Selecting a bass tone assigns it to the low range (left side) of the keyboard.

[Example of Bass Tone Assignment]



You can select either W.BASS (wood bass) or E.BASS (electric bass) as the bass tone.

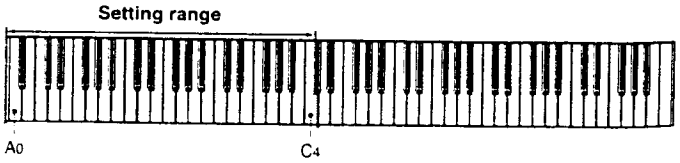
- Press the LOWER TONE button that corresponds to the bass tone you want to select.
- To deselect a bass tone, press the same LOWER TONE buttons again so the indicator above it turns off.

[To change the keyboard range of the bass tone]

The location where the keyboard changes between the bass tone and non-bass tone is called the "split point".

- While holding down the LOWER TONE button for the tone you want to select, press the keyboard key that you want to assign as the far right limit of the bass tone keyboard range.
- Key C4 is the limit for the above step. Pressing any key to the right of C4 automatically sets C4 as the rightmost limit of the bass tone range.

Setting range



- Transpose settings (page E-22) also affect the bass tone.

NOTES

- The chorus and tremolo digital effects are not applied to bass tones.
- Any change in a digital effect setting is assigned to the tone you are using. It is not, however, assigned to the bass tone.

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Layering Two Tones

You can assign two different tones to sound simultaneously when a key is pressed. You can also adjust the volume of the second tone to one of 15 levels.

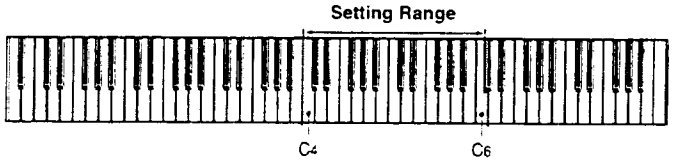
- To layer two tones, hold down the TONE button of one tone (called the "first tone") as you press the TONE button of another tone (called the "second tone").
- To unlayer two tones, simply press a single TONE button.

NOTES

- The digital effect applied to a layered set of tones is the one assigned to the first tone.
- If you change or delete a digital effect of a layered set of tones, the new setting is saved for the first tone only.

[To change the volume of the second tone]

- You can change the volume of the second tone at any time by holding down the TONE buttons of both tones (hold down 1st tone's button first), and then pressing one of the white keyboard keys in the range shown below to set the volume of the second tone.



C4 ..... Minimum
C6 ..... Maximum (power on default setting)

- The volume level in accordance with the key you press is indicated on the display as a value from L1 (minimum) to L15 (maximum).

NOTES

- You can set the volume of the second tone to one of 15 levels.
- The ratio of the first tone and second tone volumes is 1:1 (both are at maximum) when you initially layer the tones or turn on piano power.
- The second tone volume setting you make is maintained, even if you change the split tones.

Adjusting the Brilliance of a Tone

Slide the BRILLIANCE slider left and right to adjust the brilliance of a tone to the level that you want.

- Moving the slider towards MELLOW produces a more mellow sound, while moving it toward BRIGHT produces a brighter sound.

Using Digital Effects

Your CELVIANO provides you with a selection of digital effects that you can apply to tones. The following provides general descriptions of each effect, but the best way to find out how they affect tones is to experiment for yourself.

[Digital Effect Types]

- REVERB
  The REVERB effect gives you a choice of the four variations listed below. Each one simulates the acoustics of different environments.

  ROOM ..... Small, intimate live house
  STAGE ..... Small stage
  HALL 1 ..... Stage area of a large hall
  HALL 2 ..... Audience area of a large hall

- CHORUS
  The CHORUS effect is most effective for the E.PIANO tone. Used in combination with one of the PIANO tones (PIANO 2 in particular), it produces a honky-tonk* piano effect.

  * A honky-tonk piano is one that is slightly off key, which produces a tinny sound.

- TREMOLO
  Best used with the VIRBRAPHONE and E.PIANO tones, the TREMOLO effect is produced by causing a minute shift between the left and right speakers.

[To select a digital effect]

- Each press of REVERB cycles through the REVERB effect settings in the sequence: ROOM → STAGE → HALL 1 → HALL 2 → Off (no reverb). An indicator lights above REVERB button to show which variation is currently selected.
- Each press of CHORUS/TREMOLO button cycles in the sequence: CHORUS → TREMOLO → Off. An indicator lights above CHORUS/TREMOLO button to show which setting is currently selected.

[Power on effect settings]

The table below shows the effect settings that are assigned to each tone whenever you turn on piano power.

Tone Name	Digital Effect Setting
PIANO 1	STAGE
PIANO 2	STAGE
E.PIANO	STAGE + CHORUS
HARPSICHORD	ROOM
PIPE ORGAN	HALL 1
STRINGS	HALL 2
VIBRAPHONE	STAGE + TREMOLO
CHOIR	HALL 1

- The above digital effect settings can be changed after you turn on power.

NOTES

- Selecting a tone automatically selects the digital effects currently assigned to it.
- Changes you make to digital effect settings are assigned to the currently selected tone only. Digital effect settings remain in effect until you turn off piano power.
- Demo tunes have their own digital effect settings, which are automatically selected whenever you select a demo tune. You can, however, change to different digital effects while a demo tune is playing.

More about tones

Polyphony

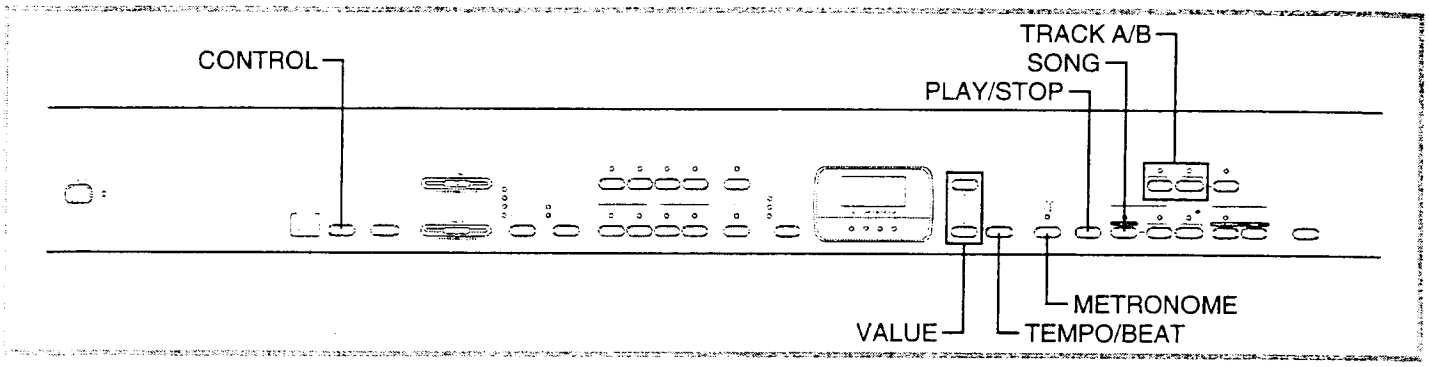
This piano can play up to 32 notes at the same time. Maximum polyphony for the PIANO 1 tone, however, is 16 notes.

Touch Response

The touch response feature of this piano causes the volume of the tones and the sound of the tones themselves to change slightly in accordance with how much pressure you apply to the keyboard, just like with an acoustic piano. Touch response affects the HARPSICHORD and PIPE ORGAN tones only slightly, because the original musical instruments normally produce the same sound, no matter how much pressure is applied.

Digitally Sampled Tones

The tones of this piano are produced using digitally recorded samples of actual musical instruments. Not all of the instruments, however, can produce tones across the entire range played by this piano (A0 through C8). In such a case, digital recordings are used for the range that actually can be produced by the original instrument, and synthesized tones are used for notes that cannot be produced naturally. Because of this, you may notice very slight differences between natural notes and synthesized notes in sound quality and in results produced when using effects. These differences are normal and do not indicate malfunction.



Tuning Curves

Generally, today's pianos employ a tuning method called "Equal Temperament." With pure Equal Temperament, the piano is tuned so that the interval from one key to the key next to it is always exactly the same. With actual piano tuning, however, the normal practice is to tune the low-range strings somewhat lower and the high-range strings somewhat higher, in order to enhance the acoustic effect of the piano. The "tuning curve" is a graphic representation that shows each interval on the keyboard from the low range to the high range, and how much lower and higher than Equal Temperament tuning the keyboard is tuned. In the case of a piano, for example, the tuning curve is a smooth S-curve. Each of the tones of the CELVIANO are pre-programmed with a tuning curve that is most suitable for it.

[Tuning curve types]

- Piano type
  With this curve, the highest key*1 is offset by +30 cents*2 while the lowest key*3 is offset by approximately –30 cents*3.

- Electric piano type
  With this curve, the highest key is offset by +15 cents while the lowest key is offset by approximately –40 cents.

- Flat type
  With this curve, each octave is divided into 12 equal semitones.

*1: C8
*2: One semitone equals 100 cents.
*3: A0

[Tuning curve settings]

The table below shows the tuning curve assigned to each tone.

Tone Name	Tuning Curve
PIANO 1	Piano Type
PIANO 2	Piano Type
E.PIANO	Electric Piano Type
HARPSICHORD	Flat Type
PIPE ORGAN	Flat Type
STRINGS	Flat Type
VIBRAPHONE	Flat Type
CHOIR	Flat Type

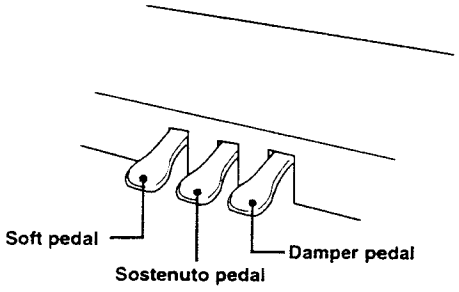
- Tuning curve settings are fixed and cannot be changed.

NOTE

The tuning curve applied to a layered set of tones is the one assigned to the first tone.

Using the Pedals

This piano comes equipped with the three pedals shown in the illustration below.



[Pedal functions]

- Damper pedal
  Pressing this pedal causes notes to reverberate and to sustain longer. In the case of the PIPE ORGAN and STRINGS tones, pressing this pedal while keyboard keys are depressed sustains the notes played until you release the pedal.

- Soft pedal
  Pressing this pedal dampens notes and slightly reduces their volume. Only notes played after the pedal is depressed are affected, and any notes played before the pedal is pressed sound at their normal volume.

- Sostenuto pedal
  Like the damper pedal, this pedal causes notes to reverberate and to sustain longer. The difference between the two pedals is the timing when they are pressed. With the sostenuto pedal, you press the pedal after depressing the notes you want to sustain. Only the notes whose keyboard keys are depressed when the sostenuto pedal is pressed are affected.

NOTES

- The following shows how pedal effects are applied during different types of operations. Note however, that the following does not apply in the case of MIDI.

  Memory playback, demo tune play ..... Pedal effects applied to notes played on the keyboard only.
  Song play ..... Pedal effects applied to both playback notes and notes played on the keyboard.

- Whether pedal effects are applied to keyboard notes only, to lesson tunes, and to memory playback depends on the multi-channel setting (page E-25).

434A-E-016A

Using the Metronome

The metronome provides a reference beat that you can use during your performances or practice sessions. You can change the beat and the tempo of the metronome.

Using the Metronome

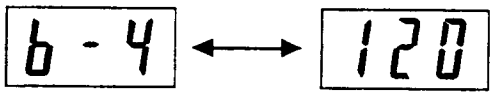
▮ PREPARATION ▮

- Check to make sure that the indicators above the SONG button, and the A and B TRACK buttons are all off. If any of these indicators are on, press the applicable button to turn them off.
- See the sections of this User's Guide covering the Song Lesson and memory for details on using the metronome in combination with these functions.

To use the metronome

1. Press **METRONOME** so the indicator above the button is lit.
2. Set the beat and the tempo of the metronome.
   - Each press of TEMPO/BEAT switches the display between the beat and the tempo settings of the metronome.

[Example Displays]



Beat setting — Tempo setting

- Use the VALUE (△ and ▽) buttons to change the displayed setting. The ▽ button decreases the displayed setting, while △ increases it. When setting the tempo, holding down △ or ▽ changes the displayed value at high speed.
- The first value of the beat can be set to a value of 2 through 6, or 0 (unaccented beat).
- The tempo can be set within the range of 30 to 300 (beats per minute).

3. Press **PLAY/STOP** to start the metronome.
   - This starts the metronome sound. The four indicators below the display light in time with the metronome beat.
4. When you want to stop the metronome, press **PLAY/STOP** again.
   - Pressing PLAY/STOP again restarts the metronome sound using the current beat and tempo setting.
   - If you want to change both the tempo and the beat before restarting the metronome, perform steps 2 and 3 here.
5. When you are finished using the metronome, press **METRONOME** so the indicator above the button is off.

▮ NOTES ▮

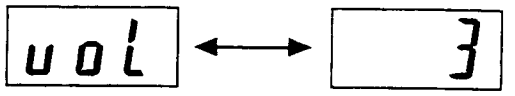
- You can change metronome beat and tempo settings while the metronome is sounding.
- You can also use the metronome in combination with Song Lesson and memory play. See the sections of this User's Guide covering these functions for details.

Adjusting the Metronome Volume

Use the following procedure to increase and decrease the volume of the metronome beat.

To adjust the metronome volume

1. Press **CONTROL** three times to display the metronome volume setting screen.
   - The metronome volume setting screen shows the current metronome volume setting, alternating with the screen title "vol".



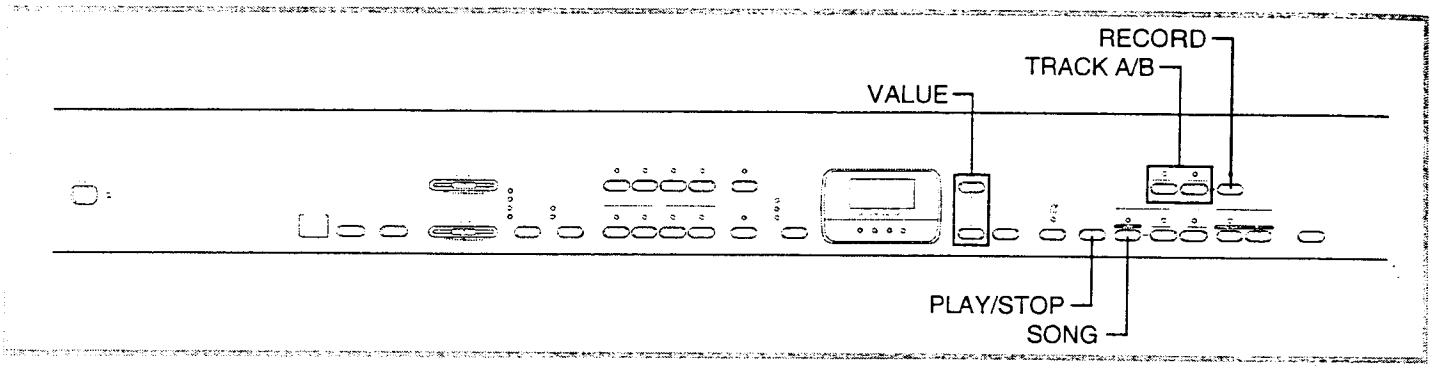
Metronome volume setting screen title — Current metronome volume setting

2. Use the **VALUE (△ and ▽) buttons** to change the displayed setting.
   - You can set a value from 0 (off) to 5 (maximum).

▮ NOTE ▮

The metronome volume is automatically set to 3 whenever you turn on piano power.

Using the Memory



This section describes how to record keyboard play to memory and playback data from memory.

About the Memory

Memory Capacity

- There are two memory tracks named Track A and Track B. The two tracks can store a combined total of approximately 5,000 notes.
- Recording stops automatically and the indicator above the RECORD button goes out whenever memory becomes full.

Recorded Data

The following is a list of the data that can be recorded in memory once recording starts.

- Anything you played on the keyboard (received MIDI data not recorded)
- Tone settings (including layered tones, layered tone volume, split tones, split point) and any tone setting changes
- Tempo and beat settings used during recording
- Pedal operations

Recorded Data Storage

This piano has a lithium battery to supply power to retain memory contents even while power is off.* The life of the lithium battery is five years after the date of manufacture of the piano. Be sure to contact your CASIO dealer about having the lithium battery replaced every five years.

* Never turn off piano power while a record operation is in progress.

IMPORTANT!

- Recording new data to a track automatically deletes any data previously stored in that track. A lit track indicator means that the track already contains data.
- Turning off power while a record operation is in progress deletes anything recorded up to that point.
- CASIO shall not be held responsible for any losses by you or any third party due to loss of data caused by malfunction or repair of this piano, or by battery replacement.

Recording

In addition to recording notes as they are played on the keyboard, you can also record to one track while playing back from the other track and record while playing along with a Song Lesson. The following procedures cover each of these operations.

To record notes from the keyboard

PREPARATION

- Select the tone and effects you want to start with.
- Make sure that the indicator above the SONG button is not lit. If it is, press SONG to turn it off.
- If you want to use the metronome during recording, start the metronome. Use the procedure under "Using the Metronome" on page E-15 to set the beat and the tempo.
- Press the TRACK button for the track you want to record to so the indicator above it is not lit.

1. Press **RECORD** to put the piano into record standby.
   - The indicator above RECORD flashes, the message "rEC" flashes on the display.
   - The indicator above the button of the currently selected track also flashes.
   - You can also change the metronome's beat setting at this time.
2. Press either of the **TRACK buttons** to select Track A or Track B.
   - The indicator above the button you press flashes to indicate that the track is selected for recording.
3. Play something on the keyboard to start recording.
   - What you play sounds from the speakers and is recorded into memory.
   - You can also start recording by pressing PLAY/STOP. In this case, blank space is inserted in memory from the point that you press PLAY/STOP up to the point you start to play on the keyboard.
   - The "rEC" message remains on the display without flashing once recording starts.
4. After you are finished recording, press **PLAY/STOP** to stop the record operation.
   - At this time the indicator above RECORD goes out, while the indicator above the recorded track remains on.
   - Here you can press PLAY/STOP and playback the data you just recorded.

434A-E-018A

To record to one track while playing back from the other track

This procedure is basically the same as that under "To record notes from the keyboard" on page E-16. The differences are as described below.

Example: To play back Track A while recording to Track B

- Before starting the procedure on page E-16, press the TRACK A button so the indicator above it is lit.
- When you enter record standby, the indicator above the TRACK A button remains lit, while the indicator above the TRACK B button flashes. If the indicator above the TRACK A button is flashing at this time, press the TRACK B button so the indicator above it flashes.
- Performing step 3 of the procedure causes Track A play back and Track B recording to start at the same time. Play on the keyboard along with the playback of Track A.
- With this procedure, the tempo and beat recorded in the track being played back is used as-is. You can change the tempo setting, but only before entering record standby. Once you enter record standby, you can also change the beat setting. It should be noted, however, that playback is performed following the last tempo and beat settings that were used for recording in any of the tracks.

To record while playing with Song Lesson

This procedure may appear to be rather complex if you are not already familiar with using simple recording and Song Lesson procedures. For this reason, we strongly recommend that you try using the recording procedure and the Song Lesson procedure separately before trying to use them in combination.

▮ PREPARATION ▮

- Press the SONG button so the indicator above it is lit, and select the tune and part you want to use for recording.
- If you want to use the metronome during recording, start the metronome. Use the procedure under "Using the Metronome" on page E-15 to set the beat and the tempo.

IMPORTANT!

You cannot use the Tune Lesson "ALL" option during recording. Be sure to select a specific tune.

1. Press **RECORD** to put the piano into record standby.
   - The indicator above RECORD flashes, the message "rEC" flashes on the display.
   - The indicator above the button of the currently selected track also flashes.
2. Press either of the **TRACK buttons** to select Track A or Track B.
   - The indicator above the button you press flashes to indicate that the track is selected for recording.
3. Press **PLAY/STOP** to start.
   - A count sounds for one measure and then actual recording starts along with playback of the Tune Lesson tune.
   - The "rEC" message remains on the display without flashing once recording starts.
4. After you are finished recording, press **PLAY/STOP** to stop the record operation.
   - At this time the indicator above RECORD goes out, while the indicator above the recorded track remains on.
   - Here you can press PLAY/STOP and playback the data you just recorded.

▮ NOTE ▮

Pressing RECORD while in record standby cancels record standby.

Playback

Use the following procedure to play back from memory.

To playback from memory

1. Press the **TRACK button** of the track you want to play back.
2. Press **PLAY/STOP** to start playback.
   - Playback stop automatically when the end of the tune is reached.
   - To stop part way through, press PLAY/STOP.
   - When playing back a recording made with Song Lesson, playback stops automatically when the end of the Song Lesson tune is reached. Conversely, playback continues until the end of the Song Lesson tune is reached, even if you stopped recording part way through the Song Lesson tune.

▮ NOTES ▮

- The indicators above the TRACK buttons of tracks that contain data are lit whenever you turn on piano power.
- If you want to playback memory contents you have just recorded, simply press PLAY/STOP.
- You cannot change the tone when playing back from memory.
- You can change the playback tempo while playing back from memory. Pressing the VALUE (△ and ▽) buttons at the same time returns the tempo to the level that was used when the recording was created.

Deleting Memory Contents

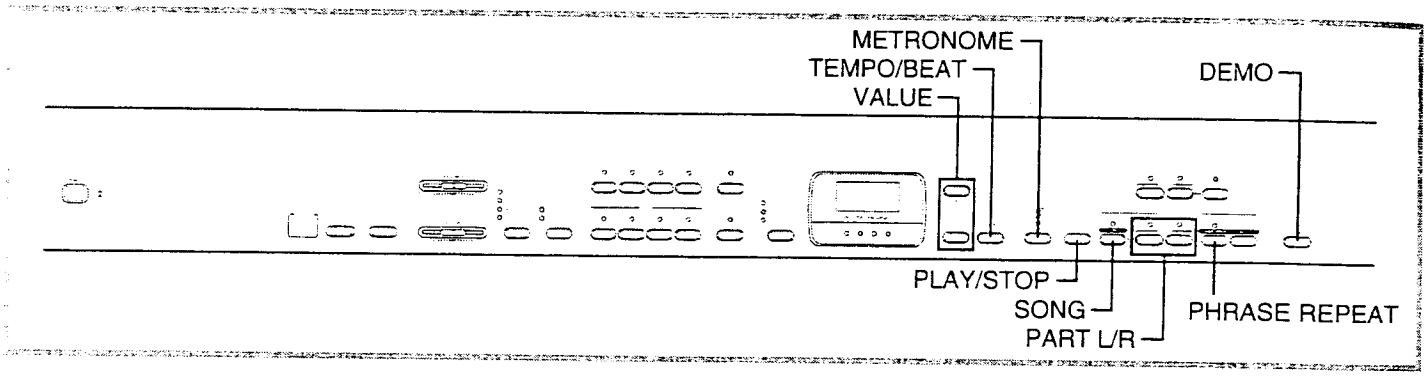
IMPORTANT!

The delete operation cannot be undone. Make sure you play back memory contents and confirm that you no longer need it before performing the following procedure.

To delete memory contents

1. Press the **RECORD button** to put the piano into record standby.
2. Press the **TRACK button** of the track whose contents you want to delete.
   - The indicator above the button whose track is selected for deletion flashes.
3. Press **PLAY/STOP** twice to delete the contents of the selected track.

Using Song Lesson



Once you select one of the 80 built-in Tune Lesson tunes, you can cut either the left-hand or right-hand part (primo and second part for four-handed tunes) and play along on the keyboard. You can adjust the tempo to play along at the pace that's comfortable for you, and you can use the metronome to help you keep in time. A Phrase Repeat feature even lets you repeatedly go over specific phrases until you master them.
See "Song Lesson Tunes" on page A-3 for full list of available Song Lesson tunes.

Playing Back Song Lesson Tunes

Use the following procedure when you want simply to play back a Song Lesson tune without playing along with it.

▮ PREPARATION ▮

If you want to use the metronome during playback, start the metronome.

To playback a Song Lesson tune

1. Press the **SONG button** so the indicator above it is lit.
   - The indicators above the PART L and PART R buttons also light, and the currently selected tune number appears on the display.
2. Use the **VALUE (△ and ▽) buttons** to specify the number of the Song Lesson tune that you want to play.
   - See "Song Lesson Tunes" on page A-3 for full list of available Song Lesson tunes.
   - Specify "ALL" when you want to play all Song Lesson songs in succession. You can select "ALL" by pressing ▽ while 1 (Tune 1) is on the display or △ while 80 (Tune 80) is on the display.
3. Press **PLAY/STOP** to start playback.
   - If you turned on the metronome before starting this procedure, a count sounds for one measure before actual playback starts.
4. When you want to stop playback, press **PLAY/STOP** again.
   - If you selected a single tune, playback stops automatically when the end of the tune is reached.
   - If you selected "ALL", tune playback continues until you press PLAY/STOP.

▮ NOTES ▮

- Pressing the SONG button causes the last tune number selected to appear on the display.
- The four indicators below the display light in time with the beat and tempo as a tune plays.
- You can change the tempo of playback after you select a tune. You can return the tempo of a tune to its preset level by selecting the same tune again (step 2 of the above procedure).
- Pressing the DEMO, SONG, or PHRASE REPEAT button causes Song Lesson tune playback to stop.
- The following operations and settings can be performed while Song Lesson tune playback is in progress: volume, brilliance, tempo, digital effect (REVERB, CHORUS/TREMOLO), touch select, tone, left-hand part/right-hand part on and off, metronome, keyboard play, pedal operations, Track A/Track B on and off.
- Receipt of MIDI IN data is enabled while Song Lesson playback is in progress.

Playing Back Tunes at a Fixed Tempo (In Tempo)

Some of the Song Lesson tunes change tempo part way through. A common musical technique, for example, is ritardando, where the tempo gradually slows down. Though such tempo changes are effective for creating certain musical moods and nuances, they are often troublesome for the musician who is trying to practice the piece. The CELVIANO solves this by giving you the option of specifying "in tempo," which tells the piano to play back Song Lesson tunes at a tempo that does not change throughout the playback of the tune.

1. While the indicator above the **SONG button** is lit, press the **TEMPO/BEAT button** twice to display the in tempo setting screen.
   - The message "OFF" appears on the display at this time.
2. Use the **VALUE (△ and ▽) buttons** to turn in tempo on and off.
   - Turn on in tempo causes the tune to be played at fixed tempo, while turning it off causes the tune to be played with its recorded tempo changes.
3. Press **PLAY/STOP** to start playback.
4. When you want to stop playback, press **PLAY/STOP** again.

▮ NOTE ▮

Changing to a different Song Lesson tune automatically turns in tempo off.

434A-E-020A

Practicing Individual Parts (Part Lesson)

Left-hand part (or second) and right-hand part (or primo) are recorded separately for Song Lesson tunes. Because of this, you can turn off either hand's part and play along with the other part on the keyboard.

▮ PREPARATION ▮

Perform steps 1 and 2 of the procedure under "To playback a Song Lesson tune" on page E-18 to select the Song Lesson tune you want to practice.

To use Part Lesson

1. Press the **PART L** or **PART R button** to select the part you want to play on the keyboard.
   - Pressing either button causes the indicator above the other button to go out.
   - * To practice the right-hand (or primo) part, press the PART R button.
     PART R button indicator: Off
     PART L button indicator: On
   - * To practice the left-hand (or second) part, press the PART L button.
     PART R button indicator: On
     PART L button indicator: Off
   - The terms "primo" and "second" refer to the piano parts of four-handed tunes.
2. Set the tempo that you want to use.
   - Press the TEMPO/BEAT button to display the practice tempo setting screen. Next, use the VALUE (△ and ▽) buttons to change the tempo setting. Pressing the VALUE (△ and ▽) buttons at the same time returns the tempo to its preset level.
   - If you want to practice in tempo (page E-18), set the tempo as described above, and then press the TEMPO/BEAT button again. Use the VALUE (△ and ▽) buttons to turn in tempo on.
3. Turn on the metronome, if you want.
   - Press METRONOME so the indicator above it is lit.
   - Leave the indicator above METRONOME off if you do not want to use the metronome during your practice session.
4. Press **PLAY/STOP** to start play of the Song Lesson tune and play along on the keyboard.
   - If you turned on the metronome, a count sounds for one measure before actual playback starts.
5. When you want to stop playback, press **PLAY/STOP** again.
   - Playback also stops automatically when the end of the tune is reached.

▮ NOTES ▮

- The beat of each Song Lesson tune is fixed, and cannot be changed.
- Recording to memory (page E-16) cannot be started while playback of a Song Lesson tune is in progress.
- Pedal operations affect both tune playback and keyboard play. When playing back Part L, any pedal operations recorded with the Song Lesson tune are also applied to keyboard play.
- See the notes under "Playing Back Song Lesson Tunes" on page E-18 for details on other operations.

Repeating a Specific Phrase (Phrase Repeat)

With Phrase Repeat you can continually repeat a specific part of a Song Lesson tune and practice playing along until you master it. It's the perfect way to learn how to play a tune part-by-part.
The following is the general procedure for learning to play a tune using Phrase Repeat.

(1) Listen to the phrase.
Use the procedure under "Playing Back Song Lesson Tunes" on page E-18 in combination with Phrase Repeat to listen to the phrase you want to learn.

(2) Try playing along.
Use the procedure under "Playing Back Song Lesson Tunes" on page E-18 in combination with Phrase Repeat to practice playing the part for each hand individually. Next, turn off the parts of both hands and try playing along.

(3) Repeat until you are satisfied with your results.
Repeat steps (1) and (2) as many times as you need to perfect your technique.

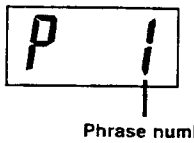
(4) Move on to the next phrase.
After you are satisfied with your play of the current phrase, press the VALUE (△ and ▽) buttons to move on to another phrase. Next, repeat steps (1) and (2) for the new phrase.

▮ PREPARATION ▮

- Select the tune that contains the phrases you want to practice.
- Perform steps 1 through 3 under "Practicing Individual Parts (Part Lesson)" on this page. Turn off the parts you want to practice. If you want to practice with both hands, turn off both parts.
- Note that you can also turn parts on and off while Phrase Repeat playback is in progress.

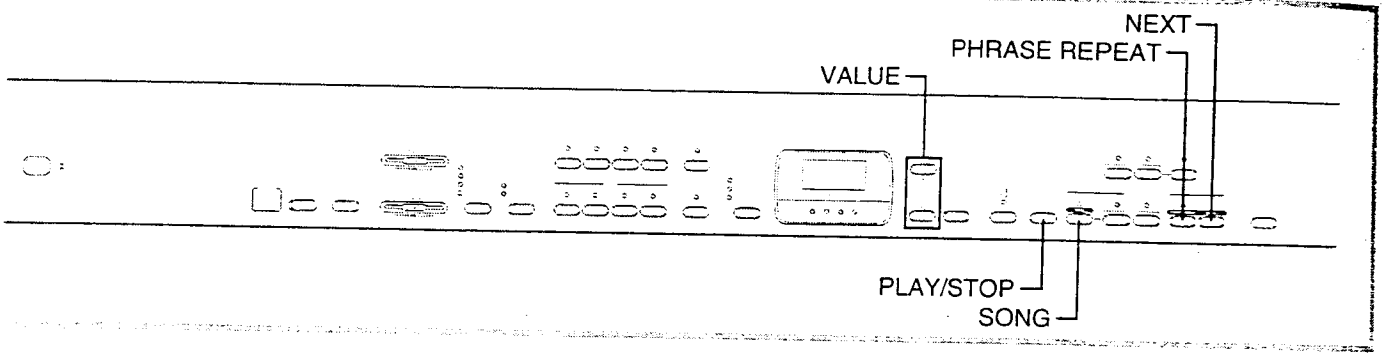
To use Phrase Repeat

1. Press **PHRASE REPEAT** to turn on Phrase Repeat.
   - The indicator above PHRASE REPEAT lights to indicate that Phrase Repeat is on.
   - The currently selected phrase number also appears on the display.



Phrase number

2. Use the **VALUE (△ and ▽) buttons** to display the number of the phrase you want to practice.
   - Numbers are pre-assigned to each of the phrases that make up the Song Lesson tunes.
   - See the score book that comes with your CELVIANO to find out the number assigned to each phrase.
3. Press **PLAY/STOP** to start playback of the selected phrase.
   - This step starts playback of both left-hand (or second) and right-hand (or primo) parts.
   - After one pass in which both parts are played, the phrase is repeated with only the part you selected in the Preparation procedure above.
4. Use the **VALUE (△ and ▽) buttons** to advance to the next phrase.
   - Pressing either △ or ▽ stops play of the current phrase and then advances to the next phrase for repeat play.
5. To stop playback, press **PLAY/STOP**.
   - The current phrase number remains on the display. To restart Phrase Repeat for the current phrase, press PLAY/STOP again.



5. To turn off Phrase Repeat, press **PHRASE REPEAT** so the indicator above it turns off.

▮ NOTES ▮

- Pressing PHRASE REPEAT while Phrase Repeat playback in progress stops playback and turns off Phrase Repeat (indicator above PHRASE REPEAT turns off).
- To change to a different Song Lesson tune, first press PHRASE REPEAT to turn off the indicator above the button. Use the VALUE (△ and ▽) buttons to change the displayed tune number, and then press PHRASE REPEAT again so the indicator above the button lights. Phrase Repeat play starts with the newly selected tune at this time.
- Pressing SONG while Phrase Repeat playback is in progress stops playback and turns off Song Lesson (indicator above SONG turns off).
- See the notes under "Practicing Individual Parts (Part Lesson)" on page E-19 for information about other operations that can be performed with Phrase Repeat.

Phrase Linking with Phrase Repeat

The NEXT button lets you practice two phrases separately, and then link them into a single long phrase. This automatically increases the size of your practice building blocks and takes you one step closer to being able to play the entire tune from beginning to end.

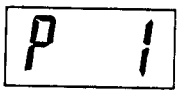
▮ PREPARATION ▮

Perform the first two steps under "Repeating a Specific Phrase (Phrase Repeat)" on page E-19. Select Phrase 1 of the tune you want to select for practice.

To use Phrase Linking

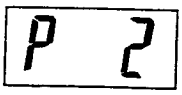
1. Press **PLAY/STOP** to start Phrase Repeat from Phrase 1.
   - Play proceeds in the following sequence:

   (1) Both parts of Phrase 1 play.
   (2) The selected part of Phrase 1 repeats for you to play along with.
   (3) (1) and (2) continue to repeat, so practice until you are satisfied with your results.



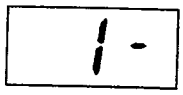
2. Press **NEXT** to advance to Phrase 2.
   - Play proceeds in the following sequence:

   (1) The display flashes until the end of Phrase 1 is reached.
   (2) Both parts of Phrase 2 play. (Display lights)
   (3) After both parts play, the selected part of Phrase 2 repeats for you to play along with.
   (4) (2) and (3) continue to repeat, so practice until you are satisfied with your results.



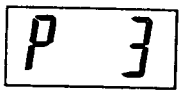
3. Press **NEXT** to repeat Phrase 1 and Phrase 2.
   - Play proceeds in the following sequence:

   (1) The display flashes until the end of Phrase 2 is reached.
   (2) Both parts of Phrase 1 and 2 start to play. (Display lights)
   (3) After both parts play, the selected parts of Phrase 1 and Phrase 2 play in succession for you to play along with.
   (4) (2) and (3) continue to repeat, so practice until you are satisfied with your results.

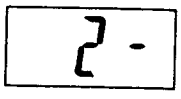


4. Press **NEXT** to advance to Phrase 3.
   - Play proceeds in the following sequence:

   (1) The display flashes until the end of Phrases 1 and 2 is reached.
   (2) Next, both parts of Phrase 3 play. (Display lights)
   (3) After both parts play, the selected part of Phrase 3 repeats for you to play along with.
   (4) (2) and (3) continue to repeat, so practice until you are satisfied with your results.



5. Press **NEXT** to repeat Phrase 2 and Phrase 3.
   (1) The display flashes until the end of Phrase 3 is reached.
   (2) Both parts of Phrase 2 and 3 start to play. (Display lights)
   (3) After both parts play, the selected parts of Phrase 2 and Phrase 3 play in succession for you to play along with.
   (4) (2) and (3) continue to repeat, so practice until you are satisfied with your results.



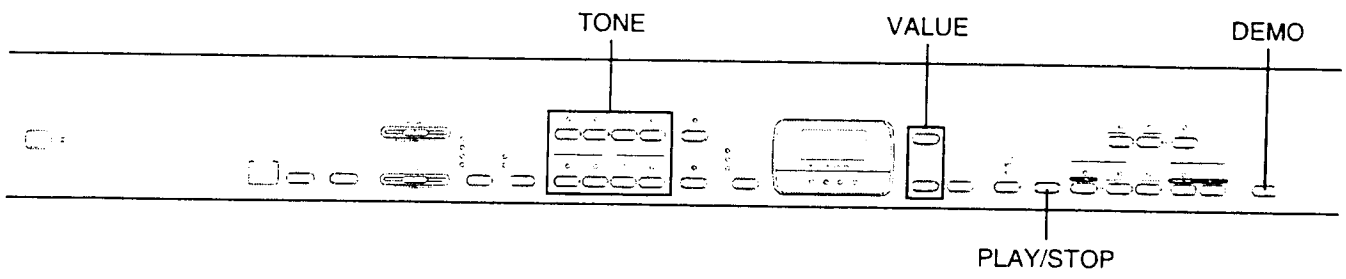
6. Continue pressing **NEXT** to continue advancing to the next phrase and linking it with the phrase before it.

▮ NOTE ▮

To start from a phrase other than Phrase 1 in the above procedure, use the VALUE (△ and ▽) buttons to display the number of the phrase you want to go to before you press PLAY/STOP in step 1.

434A-E-022B

Using Demo Tunes



Your CELVIANO comes with eight built-in demo tunes, each of which features one of the eight built-in tones.

Playing the Demo Tunes in Sequence

Press the DEMO button.

- All the demo tunes play in sequence, starting from the Tune 1.
- The demo tune that is currently playing is indicated on the display as a value from d-1 through d-8.

Playing a Specific Demo Tune

While holding the TONE button that corresponds to the demo tune you want to play, press DEMO.

- The tune you select continues to repeat until you stop it.
- You can change the currently selected demo tune during playback by pressing the VALUE (△ or ▽) button.

Stopping Demo Tune Play

Press DEMO or PLAY/STOP to stop demo tune play.

NOTES

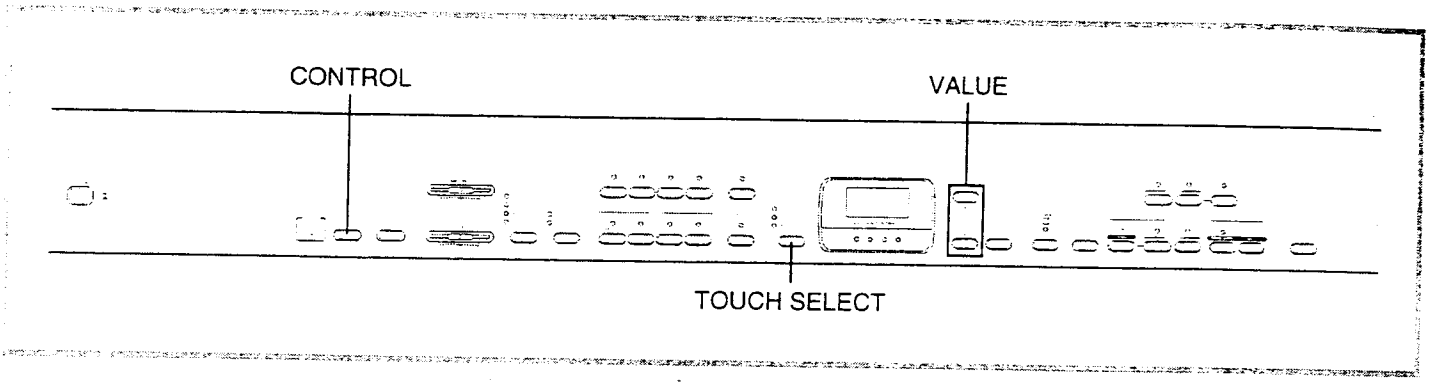
- You cannot change the tempo or tone, or turn on the metronome while a demo tune is playing.
- Playing on the keyboard during demo tune play plays notes using the demo tune's tone.
- Tone, digital effect, tuning curve, and temperament settings are changed automatically when a demo tune is played. These changes are temporary, and remain in effect only while the demo tune is playing.
- Of the above automatic settings, you can manually change the digital effect setting if you want.
- Pedal operations performed during demo tune play are applied to notes played on the keyboard only. They are not applied to demo tune playback.
- Demo tune notes cannot be sent as MIDI data.

Demo Tune List

No.	Tone Button	Tune Name	Composer	Playing Time	First Tone	Second Tone	Digital Effect
1	PIANO 1	Valse brillante op.34 No.1	F.F. Chopin	4'42"	PIANO 1	–	STAGE
2	PIANO 2	Crystal Fountain	Edward Alstrom	1'34"	PIANO 2	CHOIR	STAGE
3	E.PIANO	Sunrise With You	Original	2'16"	E.PIANO	STRINGS	STAGE CHORUS
4	HARPSICHORD	Italienisches Konzert 1mov. BWV 971	J.S. Bach	3'48"	HARPSICHORD	–	ROOM
5	PIPE ORGAN	Organic Live	Original	1'47"	PIPE ORGAN	–	HALL 1
6	STRINGS	Wind Song	Original	2'00"	STRINGS	PIANO 2	HALL 2
7	VIBRAPHONE	Balloons On The Highway	Edward Alstrom	1'26"	VIBRAPHONE	PIANO 2/W.BASS	STAGE CHORUS
8	CHOIR	Sunward Rumination	Edward Alstrom	1'39"	CHOIR	PIPE ORGAN, HARPSICHORD	HALL 1

* Total play time for all songs played in succession is approximately 19'25".

Keyboard Settings



Using Touch Select

This setting lets you adjust the touch of the keyboard to suit your own playing style. This means you can select a stronger touch for those with powerful hands, and a lighter touch for beginners and anyone else with less power.

[Touch Select Settings]

LIGHT ..... This setting produces strong output, even when light pressure is applied to the keyboard.
MIDDLE ..... This is the standard setting.
HEAVY ..... This setting requires relatively strong keyboard pressure to produce normal output.

- Each press of TOUCH SELECT cycles through the available touch select settings.
- Indicators above the TOUCH SELECT button indicate which setting is currently selected.

NOTE

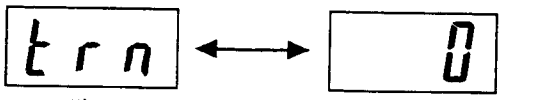
Touch select is automatically set to MIDDLE whenever you turn on CELVIANO power.

Using Transpose

Transpose lets you adjust the pitch of your CELVIANO in semitone steps. This means you can change the key of the piano to suit the voice of a vocalist or the key of another musical instrument, without having to learn to play a piece in another key.

To change the transpose setting

1. Press **CONTROL** once to display the transpose setting screen.
   - The transpose setting screen shows the current transpose setting, alternating with the screen title "trn".



Transpose setting screen title — Current transpose setting

2. Use the **VALUE (△ and ▽) buttons** to set the transpose value you want.
   - You can set the transpose value in the range of –6 (F♯) to 5 (F).
   - Pressing the VALUE (△ and ▽) buttons at the same time returns the transpose setting to standard value of 0 (C).

NOTES

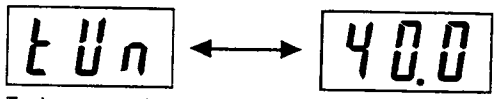
- The transpose value is automatically set to 0 (C) whenever you turn on piano power.
- Demo tune play temporarily changes the transpose setting to 0 (C). The setting returns to any setting you make after demo tune play is finished.
- The transpose setting of demo tunes cannot be changed.

Adjusting the Tuning of the Piano

You can adjust the overall tuning of the piano for play along with another instrument or compact disc.

To adjust the tuning of the piano

1. Press **CONTROL** twice to display the tuning screen.
   - The tuning screen shows the current tuning, alternating with the screen title "tUn".



Tuning screen title — Current tuning

2. Use the **VALUE (△ and ▽) buttons** to set the tuning value you want.
   - You can set the tuning value in the range of 27.0 (427Hz) to 53.0 (453Hz), in 0.2Hz steps.
   - Pressing the VALUE (△ and ▽) buttons at the same time returns the turning to standard value of 40.0.

NOTES

- The value 40.0 on the display represents the rightmost three digits of the frequency 440.0Hz.
- Tuning can be adjusted to any one of 130 steps.
- The tuning value is automatically set to its standard value whenever you turn on piano power.
- With Baroque pitch the standard tuning value is 415.3Hz, so tuning can be adjusted within the range of 02.3 (402.3Hz) to 28.3 (428.3Hz).

Temperament

Modern pianos employ a tuning system called "Equal Temperament," which is also used by your CELVIANO. Equal Temperament, however, is a relatively new tuning system, and different temperaments were in use during the times of Bach, Beethoven, and Chopin. Your CELVIANO comes with the seven temperament settings listed below, which adjust the tuning of the keyboard to suit a variety of classical pieces.

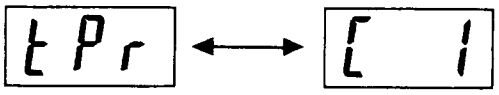
[Temperament Settings]

(1) Equal Temperament
(2) Kirnberger III
(3) Werckmeister
(4) Mean-Tone System
(5) Pythagorean System
(6) Just Major Intonation
(7) Just Minor Intonation

434A-E-024A

To change temperament

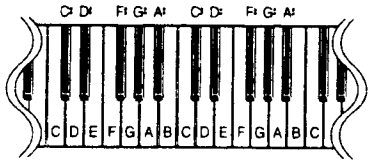
1. Press **CONTROL** four times to display the temperament setting screen.
   - The temperament setting screen shows the current temperament setting, alternating with the screen title "tPr".



Temperament setting screen title — Current temperament setting

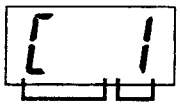
2. Use the **VALUE (△ and ▽) buttons** to set the temperament setting you want.
   - Pressing the VALUE (△ and ▽) buttons at the same time returns the tuning to Even Temperament root C.

3. Press a keyboard key to set the root.
   - Any one of the keyboard keys can be used to specify the root.



Root settings

[Display Examples]

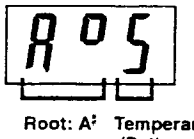


Root: C Temperament: 1 (Equal)

C: Equal Temperament

Sharp symbol

C♯: Equal Temperament



Root: A♯ Temperament: 5 (Pythagorean)

A♯: Pythagorean

4. After making the setting you want, press **CONTROL** twice to clear the temperament setting screen.

NOTE

The piano type tuning curve is used for Equal Temperament, while the flat type tuning curve is used for other temperaments.

About Temperaments

(1) Equal Temperament
This tuning system is the most widely used for keyboard musical instruments in the world today. The octave is divided into 12 semitones that are equal in frequency ratio. With this system, you can perform in all the major and minor keys without any adjustment. Though we take this system for granted these days, it was a revolutionary development in the history of music. Equal Temperament tuning has been the most common system used in the world since the middle of the 18th Century.

(2) Kirnberger III
This is also one of the precursors to equal temperament. It is an evolution of just intonation and the mean-tone system, and all keys (from C-major to F♯-major) can be used for keyboard play.

(3) Werckmeister
Werckmeister is a famous theorist who also did research on equal temperament. This particular system is said to be a precursor to equal temperament, and all keys (from C-major to F♯-major) can be used for keyboard play.

(4) Mean-Tone System
This system was the first actually for tuning of keyboard musical instruments. It was widely used starting from the Renaissance up until the second half of the 18th Century. During the days of Handel and Bach, it was employed for cembalos, organs, and pianos.

(5) Pythagorean System
This system was developed by the philosopher Pythagoras sometime during the 5th Century B.C. Most of the fifths in this system do not deviate from the "pure" (acoustically correct) intervals. The Pythagorean system is perfect within a small range of tones and in the simple keys, but it becomes inadequate in others. Despite this, this system was used for Middle Age religious music, which was performed (sung) using only the simple keys.

(6) Just Intonation
This system is one of the "pure" systems in which many of the fifths and thirds are acoustically correct. Try setting the root to C and playing C, E, G.

Using Baroque Pitch

During the Baroque Era, standard pitch was lower than the modern standard. The Baroque pitch setting of your CELVIANO lets you play Baroque era music at the pitch it was written for.

Modern standard ..... A4 = 440.0Hz
Baroque pitch ..... A4 = 415.3Hz

To turn Baroque pitch off and on

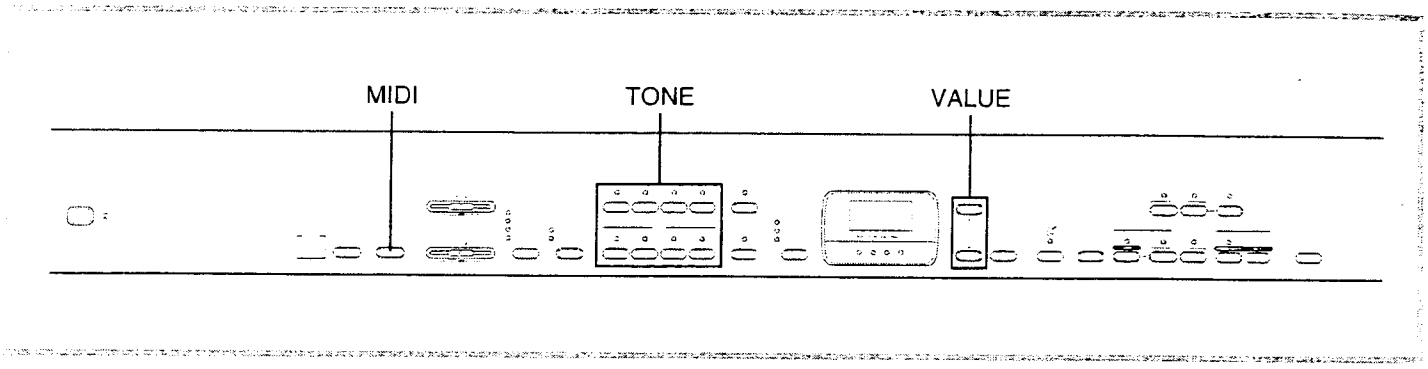
1. Press **CONTROL** five times to display the Baroque setting screen.
   - The Baroque setting screen shows the current Baroque setting, alternating with the screen title "brq".

Baroque setting screen title — Current Baroque setting

2. Use the **VALUE (△ and ▽) buttons** to turn Baroque pitch on and off.
   - Turning on Baroque pitch sets the pitch of the piano to A4 = 415.3Hz.

3. After making the setting you want, press **CONTROL** to clear the Baroque pitch setting screen.

MIDI

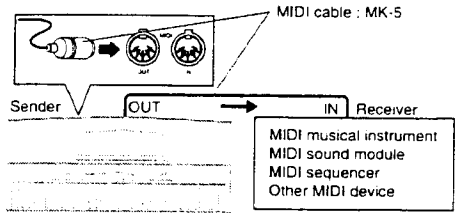


What is MIDI?

The letters MIDI stand for Musical Instrument Digital Interface, which is the name of a worldwide standard for digital signals and connectors that makes it possible to exchange musical data between musical instruments and computers (machines) produced by different manufacturers. MIDI compatible equipment can exchange keyboard key press, key release, tone change, and other data as messages.
Though you do not need any special knowledge about MIDI to use your CELVIANO as a stand-alone unit, MIDI operations require a bit of specialized knowledge. This section provides you with an overview of MIDI that will help to get you going.

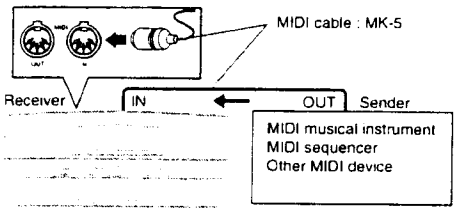
What you can do with MIDI

Send



- What you play on the CELVIANO can be sent to the connected device as MIDI messages*1. The connected device sounds notes in accordance with the messages it receives.
- MIDI messages*1 can be sent from the CELVIANO to a commercially available MIDI sequencer*2 for recording.

Receive



- The CELVIANO can be used to sound notes sent as MIDI messages from a connected device.
- Commercially available MIDI piano data can be sent from a MIDI sequencer*2 or MIDI-capable personal computer for playback on the CELVIANO. Up to 16 parts can be played simultaneously by the CELVIANO.

*1 Keyboard play, memory playback, and Song Lesson playback (80 tunes) data can be sent as MIDI data. Demo tunes cannot be sent as MIDI data.
*2 A device that contains memory storage for MIDI data. Some MIDI sequencers feature external storage capabilities, which let you record a virtually unlimited number of tunes.

MIDI Connections

Two MIDI cables, one for sending and one for receiving, are required for two-way recording and playback capabilities with a connected MIDI sequencer or other device. If you want to use the MIDI THRU function of a connected device, be sure to turn CELVIANO LOCAL CONTROL off (page E-27).

MIDI Channels

MIDI allows you to send the data for multiple parts at the same time, with each part being sent over a separate MIDI channel. There are 16 MIDI channels, numbered 1 through 16, and MIDI channel data is always included whenever you exchange data (key press, pedal operation, etc.).
Both the sending machine and the receiving machine must be set to the same channel for the receiving unit to correctly receive and play data. If the receiving machine is set to Channel 2, for example, it receives only MIDI Channel 2 data, and all other channels are ignored.
Your CELVIANO is equipped with multi-timbre capabilities, which means it can receive messages over all 16 MIDI channels and play up to 16 parts at the same time.
Keyboard and pedal operations performed on your CELVIANO are sent out by selecting a MIDI channel (1 to 16) and then sending the appropriate message.

Simultaneous Receive Over Multiple Channels (Multi-Timbre)

Turning on the Multi-Timbre mode makes it possible to assign the CELVIANO's built-in tones to MIDI channels 1 through 16. Then you can simultaneously sound multiple channels to play from a commercially available multi-track sequencer.

NOTES

- The Multi-Timbre mode is turned off whenever you turn on piano power. Use the procedure under "To turn the Multi-Timbre mode on and off" on page E-25 to turn it on. See "Assigning Tones to Individual Channels" on page E-25 for details on assigning tones to each channel.
- Up to 16 channels can be received simultaneously (Channel 1 through channel 16).
- The number of channels to be received simultaneously must be predetermined. If it becomes necessary to cancel a channel, the cancel operation must be performed on the sending side.

434A-E-026A

To turn the Multi-Timbre mode on and off

1. Press **MIDI** three times to display the Multi-Timbre setting screen.
   - The Multi-Timbre setting screen shows the current Multi-Timbre setting, alternating with the screen title "tbr".
2. Use the **VALUE (△ and ▽) buttons** to turn Multi-Timbre on and off.
3. After making the setting you want, press **MIDI** three times to clear the Multi-Timbre setting screen.

Setting the Basic Channel

When Multi-Timbre is turned off (see section above), MIDI data is sent and received over one of the 16 available channels. This channel is called the "Basic Channel."

To set the Basic Channel

1. Press **MIDI** once to display the Basic Channel setting screen.
   - The Basic Channel setting screen shows the current Basic Channel setting, alternating with the screen title "CH".
2. Use the **VALUE (△ and ▽) buttons** to change the Basic Channel setting to a value from 1 to 16.
   - Pressing the VALUE (△ and ▽) buttons at the same time returns the Basic Channel setting to 1.
3. After making the setting you want, press **MIDI** five times to clear the Basic Channel setting screen.

NOTES

- You cannot specify a specific channel for receiving MIDI data on this piano. Instead, you should specify the send channel on the sending device.
- The Basic Channel is automatically set to 1 whenever you turn on piano power.

Assigning Tones to Individual Channels

Note that Multi-Timbre must be turned on before you can assign tones to individual channels. Perform the procedure under "To turn the Multi-Timbre mode on and off" to turn on Multi-Timbre before assigning tones to channels.

NOTE

The tone PIANO 1 is automatically assigned to all channels whenever you turn on piano power.

To assign tones to individual channels

1. Make the channel to which you want to assign a tone the Basic Channel.
   - See the procedure under "Setting the Basic Channel" for details on making a channel the Basic Channel.
2. Press the **TONE button** of the tone you want to assign to the channel.
3. Repeat steps 1 and 2 for all of the channels to which you want to assign tones.

NOTE

You can also assign tones to channels using a Program Change message sent from a connected MIDI device.

Using Multi-Channel

When Multi-Channel is turned on, you can send the piano's song play, memory playback, keyboard play, and other data through the MIDI OUT terminal. Turning on Multi-Channel also causes pedal operations performed while playing on the keyboard to affects keyboard play only, without affecting song play and memory playback.

To turn Multi-Channel on and off

1. Press **MIDI** four times to display the Multi-Channel setting screen.
   - The Multi-Channel setting screen shows the current Multi-Channel setting, alternating with the screen title "Con".
2. Use the **VALUE (△ and ▽) buttons** to turn Multi-Channel on and off.

About pedal operations

The following shows how pedal operations work when Multi-Channel is turned on and off.

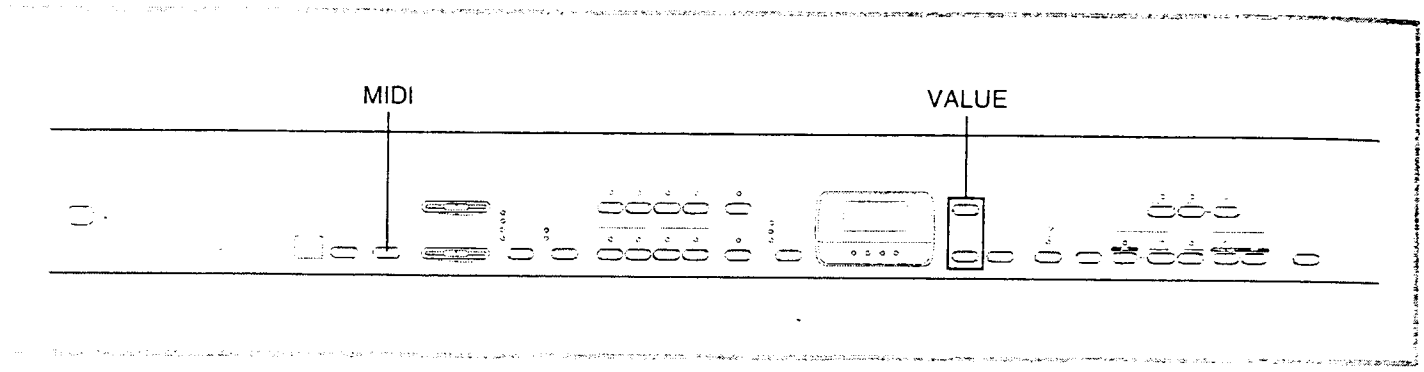
- Multi-Channel On
  Sounds produced by the piano are affected by pedal operations according to the source of the sound, as shown below.

Keyboard play:	Piano pedal operations
MIDI IN:	Pedal signals sent as MIDI messages
Tune playback:	Pedal signals recorded with the tune
Memory Playback:	Pedal signals recorded in memory with the notes

- Multi-Channel Off
  Sounds produced by the piano are affected by all pedal operations, regardless of the source of the sound and pedal operations. This means that if you operate the piano's pedals while playing MIDI IN data, built-in tunes, or a tune stored in memory, the output is affected by both the piano pedal operations and any pedal operations accompanying the data (MIDI IN, built-in tune, memory) being played.

NOTES

- Multi-Channel is turned on whenever you turn on piano power. It is automatically turned off whenever you use the Song Lesson (page E-18).
- For details on the output channels used for song play, memory playback, and keyboard play, see "Sending Memory Playback and Song Lesson Play Data" on page E-26.



Sending Memory Playback and Song Lesson Play Data

You can send memory playback and Song Lesson play as MIDI data. The send channel used depends on the Basic Channel setting, as shown in the table below.

Keyboard Play	Basic Channel
Memory Track A	Basic Channel + 1*
Memory Track B	Basic Channel + 2*
Song Lesson Tune Right (R) Part	Basic Channel + 3*
Song Lesson Tune Left (L) Part	Basic Channel + 4*

* Whenever adding the Basic Channel number to a value from 1 to 4 produces a result that is greater than 16, the send channel used is the one whose number is equal to the result minus 16.
* The information in the above table is valid only when Multi-Channel is turned on. When Multi-Channel is off, all data is sent over the Basic Channel.

Setting the Program Change Number Type

The tones of your CELVIANO are assigned the Type 1 program numbers and General MIDI System (see "General MIDI") compliant Type 2 program numbers shown in the table below.

Tone Name	Type 1		Type 2	
	Send	Receive	Send	Receive
PIANO 1	0	0	0	0, 2, 3
PIANO 2	1	1	1	1
E.PIANO	2	2	4	4, 5
HARPSICHORD	3	3	6	6
PIPE ORGAN	4	4	19	16 - 20
STRINGS	5	5	48	48 - 51
VIBRAPHONE	6	6	11	11 - 13
CHOIR	7	7	52	52 - 54

To change the program change number type

Press **MIDI** twice to display the program change number type setting screen.

- The program change number type setting screen shows the current program change number type setting, alternating with the screen title "PGt".

Use the **VALUE (△ and ▽) buttons** to select 1 (Type 1) or 2 (Type 2) as the program change number type.

General MIDI

The General MIDI System is a set of specifications for sound generating devices agreed upon by world MIDI manufacturers. These specifications were developed to allow the creation of music data that is not limited to specific equipment makers and models. Among other things, General MIDI defines the tone number sequence and the number of MIDI channels that can be used. Any device equipped with a sound source that supports General MIDI is able to produce sounds of similar nuances, regardless of the manufacturer or model.

The Type 2 program change numbers of your CELVIANO assign program numbers to tones so they comply with the General MIDI System. Type 2 program change numbers provide the following capabilities.

(1) You can send from the CELVIANO's manual memory for play on a connected General MIDI System compatible device.
(2) When the Multi-Timber mode is turned on, you can received General MIDI System data from a connected sequencer or other device for play using the CELVIANO's tones.

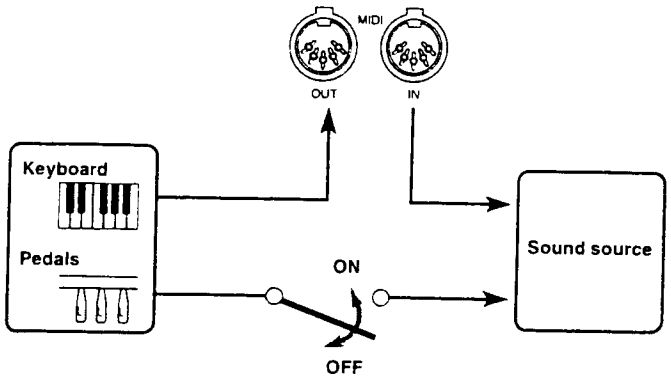
In the case of (2), tone switching is performed only when a program number that corresponds to any of the CELVIANO's eight non-bass tones is received. No tone switching is performed when any other program number is received.

The following table shows the relationship between CELVIANO tones and General MIDI sounds.

CELVIANO Tone	Send	Receive	Corresponding General MIDI Sound
PIANO 1	0	0	Acoustic Grand Piano
		2	Electric Grand Piano
		3	Honky-tonk Piano
PIANO 2	1	1	Bright Acoustic Piano
E.PIANO	4	4	Electric Piano 1
		5	Electric Piano 2
HARPSICHORD	6	6	Harpsichord
PIPE ORGAN	19	16	Drawbar Organ
		17	Percussive Organ
		18	Rock Organ
		19	Church Organ
		20	Reed Organ
STRINGS	48	48	String Ensemble 1
		49	String Ensemble 2
		50	SynthStrings 1
		51	SynthStrings 2
VIBRAPHONE	11	11	Vibraphone
		12	Marimba
		13	Xylophone
CHOIR	52	52	Choir Aahs
		53	Voice Oohs
		54	Synth-Voice

Turning Local Control On and Off

This setting effectively determines whether or not the keyboard and pedals of the CELVIANO are connected to the CELVIANO's sound source, as illustrated below.



Local Control

When Local Control is on (the normal setting), anything played on the keyboard is sounded by the internal sound source and simultaneously output from the MIDI OUT terminal. When off, anything played on the keyboard is output from the MIDI OUT terminal only, without being sounded by the sound source.
Local Control can be turned off when you are using the CELVIANO as the sound source of a connected sequencer or other device, and you want to guard against sound being produced should the CELVIANO keyboard be pressed accidentally.

To turn Local Control on and off

1. Press **MIDI** five times to display the Local Control setting screen.
   - The Local Control setting screen shows the current Local Control setting, alternating with the screen title "Lon".
2. Use the **VALUE (△ and ▽) buttons** to turn Local Control on and off.

NOTES

- Note that no sound will be produced from the CELVIANO's speakers if you press the keyboard while Local Control is turned off.
- Local Control is turned on automatically whenever you turn on piano power or play a demo tune.

MIDI Data Notes

This section provides details about the MIDI data your CELVIANO sends and receives. You can also find further technical information in the MIDI Implementation Chart* at the end of this User's Guide.

* The MIDI Implementation Chart is a standard format summary of how data is transferred between your CELVIANO and a connected MIDI device.

Keyboard Data (Note On, Note Off, Note Number, Velocity)

The following four types of keyboard data can be sent and received.

Data	Meaning
Note On	Keyboard key is pressed.
Note Off	Keyboard key is released.
Note Number	Which key is pressed.
Velocity	Pressure applied

- Note Off is sent as Velocity = 0.
- Receipt of a note that is outside the 88-key range of the CELVIANO keyboard is played using the same note in the nearest octave within the CELVIANO keyboard range.

Tone Change Data (Program Change)

Whenever you change the tone on the CELVIANO, tone change data (Program Change) is also sent out as MIDI data. Conversely, receipt of a Program Change from a connected MIDI device causes the CELVIANO to change to the applicable tone. The following table shows Program Change numbers that are assigned to each of the CELVIANO's tone.

Tone Name	Type 1		Type 2	
	Send	Receive	Send	Receive
PIANO 1	0	0	0	0, 2, 3
PIANO 2	1	1	1	1
E.PIANO	2	2	4	4, 5
HARPSICHORD	3	3	6	6
PIPE ORGAN	4	4	19	16 - 20
STRINGS	5	5	48	48 - 51
VIBRAPHONE	6	6	11	11 - 13
CHOIR	7	7	52	52 - 54

- As can be seen in the above table, there are two types of program numbers (Type 1 and Type 2), either of which can be selected by you. For details on how to select a program number type and what each type is, see "Setting the Program Change Number Type" on page E-26.

Pedal and Effect Operation Data (Control Change)

Control Change is used to send and receive data about damper, soft, and sostenuto pedal depress and release, as well as data about digital effects. Send and receive conditions are shown in the table below.

Operation	Control Change Number	Send Data	Receive Data
Damper Pedal	64	0: OFF, 127: ON	0 to 127 (0: OFF)
Soft Pedal	67	0: OFF, 127: ON	0 to 63: OFF, 64 to 127: ON
Sostenuto Pedal	66	0: OFF, 127: ON	0 to 63: OFF, 64 to 127: ON
Reverb	91	0: OFF 32: ROOM 64: STAGE 96: HALL1 127: HALL2	0: OFF 1 to 32: ROOM 33 to 64: STAGE 65 to 96: HALL1 97 to 127: HALL2
Tremolo	92	127: ON 0: OFF	64 to 127: ON 0 to 63: OFF
Chorus	93	127: ON 0: OFF	64 to 127: ON 0 to 63: OFF

Tone Layer/Split Setting Data (System Exclusive Message Send and Receive)

CELVIANO tone layer and split setting data is sent and received as System Exclusive Messages using a hexadecimal number in the format shown below.

[F0] [44] [06] [00] [7n] [00] [03] - [**] [nn] [mm] - [F7]

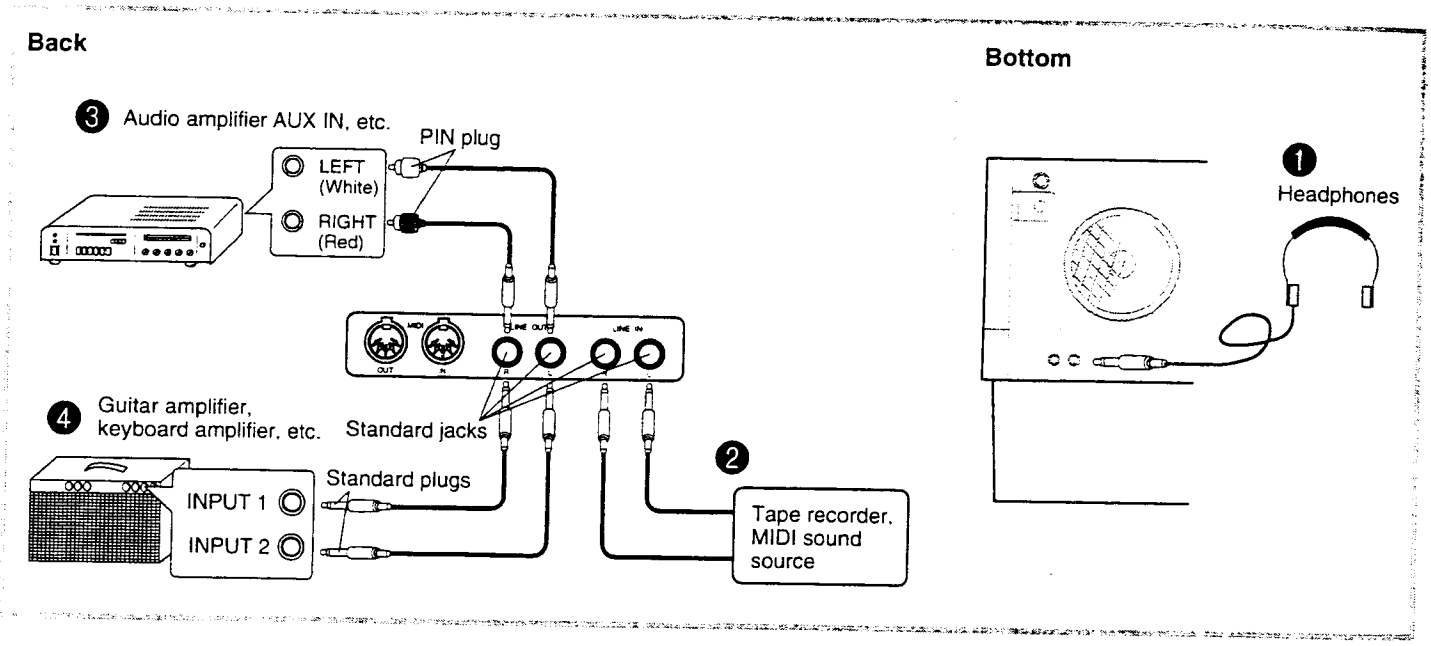
[01][nn][mm] Split On	[nn] : Split Tone	[20] : W. BASS [21] : E. BASS
	[mm] : Split Point	[15] to [3C] : Corresponds to keyboard note number.
[02][xx][xx] Split Off	[xx] : Ignored (Sent as [00])	
[03][nn][mm] Layer On	[nn] : Program Change	Number corresponding to layer tone Program Change number (Program Change number Type 2)
	[mm] : Layer Volume	[00] to [0E] : Corresponds to layer tone volume.
[04][xx][xx] Layer Off	[xx] : Ignored (Sent as [00])	

Troubleshooting

Symptom	Possible Cause	Action	Reference
No sound produced when keyboard keys are pressed.	1. VOLUME slider set to MIN. 2. Headphones connected to the piano. 3. Local Control turned off.	1. Move VOLUME slider more towards the MAX side. 2. Disconnect the headphones from the piano. 3. Turn on Local control.	Page E-12 Page E-30 Page E-27
Keyboard out of tune.	1. Transpose is set to a value other than 0. 2. Incorrect tuning setting	1. Change the transpose setting to 0, or turn piano power off and then back on again. 2. Correct the tuning setting, or turn piano power off and then back on again.	Page E-22 Page E-22
Pedal effect continues to be applied even though pedals are not pressed.	Problem with the connection between the pedals and piano.	Turn off piano power and then check to make sure that the pedal plug is securely connected to the piano's pedal connector.	Page E-33
No sound produced by demo tune play.	1. VOLUME slider set to MIN. 2. Headphones connected to the piano.	1. Move VOLUME slider more towards the MAX side. 2. Disconnect the headphones from the piano.	Page E-12 Page E-30
Memory contents deleted.	Lithium battery is dead.	Contact your CASIO Service Provider for replacement of the lithium battery.	Page E-7
No sound produced by connected external MIDI sound source when CELVIANO keys are pressed.	1. CELVIANO Basic Channel does not match the Basic Channel of the MIDI sound source. 2. Volume or expression setting of the external sound source is set to 0.	1. Change the Basic Channel settings so they are identical. 2. Change the volume or expression setting of the external sound source to an appropriate value.	Page E-25 See the documentation that comes with the external sound source.

Connections

Connecting to an audio or musical instrument amplifier lets you produce even clearer, more powerful sound through external speakers.



IMPORTANT!

- Whenever connecting external equipment, first set the VOLUME slider and the volume controller of the external equipment relatively low volume settings. You can later adjust volume to the level you want after connections are complete.
- Be sure also to refer to the documentation that comes with the equipment you are connecting to for its proper connection procedures.

Connecting Headphones ❶

Connect commercially available headphones to the CELVIANO's headphones jack. This cuts off the built-in speakers, which means you can practice even late at night without disturbing others. To protect your hearing, make sure that you do not set the volume level too high when using headphones.

Playing External Equipment From Your CELVIANO ❷

Use commercially available cords to connect the CELVIANO's LINE IN jacks to the LINE OUT jacks of the external equipment. (MIDI sound source, Tape recorder, etc.) It is up to you to purchase connecting cables that are compatible with the equipment you are connecting.

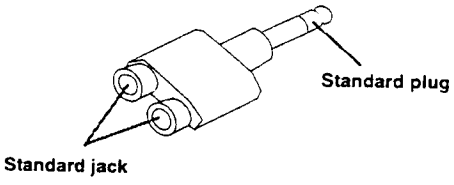
Connecting to Audio Equipment ❸

Use commercially available cords to connect to the two jacks as shown in Figure ❸. It is up to you to purchase connecting cables like the ones shown in the illustration for connection. Normally in this configuration, you must set the audio equipment's input selector to the setting that specifies the terminal (such as AUX IN) that the CELVIANO is connected to. Use the CELVIANO's VOLUME slider to adjust the volume level.

Connecting to a Musical Instrument Amplifier ❹

Use commercially available cords to connect to the two jacks as shown in Figure ❹. It is up to you to purchase connecting cables like the ones shown in the illustration for connection. Use the CELVIANO's VOLUME slider to adjust the volume level.

* If your amplifier has only one input jack, use an adapter like the one shown below.



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Assembly Instructions

Caution!

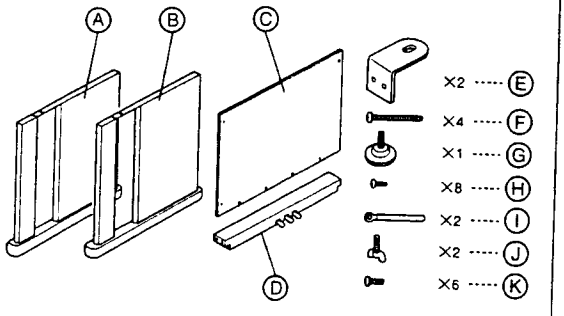
- Take particular care to avoid injury when installing legs and pedals, and when mounting the piano onto the stand.

Important!

- Be sure to assemble the stand on a flat surface.
- This stand does not include any of the tools required to assemble it. You should have a large Phillips head (+) screwdriver on hand for assembly.

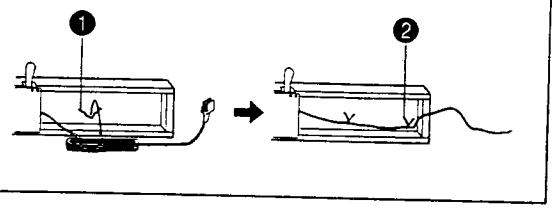
- Check the items that come with the unit to make sure that everything shown in Figure 1 (Ⓐ through Ⓚ) is included. All screws are in a plastic bag which is taped to the inside of the packing cardboard.

Figure 1



- Before starting actual assembly of the stand, undo the clip at location ❶ (Figure 2) where the pedal cable comes out the back of crosspiece Ⓓ. Pull out the coiled cable and secure it in place with two clips at points ❶ and ❷ as shown in the illustration.

Figure 2



1 Assembling the stand.

Refer to Figures 3 and 4 as you assemble the stand according to the following procedure.

1. Install the two angle brackets Ⓔ onto side uprights Ⓐ and Ⓑ using the Ⓗ screws. (Figure 3).
2. Install height adjustment screw Ⓖ into hole ❸ located in the center of the back of crosspiece Ⓓ (Figure 3).
3. Attach side uprights Ⓐ and Ⓑ to crosspiece Ⓓ using the four Ⓕ screws (Figure 3).

- Make sure that crosspiece Ⓓ is correctly positioned as indicated by ❹ in the inset of Figure 3. It should be perpendicular (at a 90-degree angle) to the two side uprights. Also make sure that uprights Ⓐ and Ⓑ are parallel with each other. If the pieces are not positioned correctly, the nuts built into crosspiece Ⓓ will not seat properly with the Ⓕ screws. This can result in stripping of the threads and free turning of nuts.

4. Install back panel Ⓒ onto the assembly made up of side uprights Ⓐ and Ⓑ, and crosspiece Ⓓ. Secure it in place with four Ⓗ screws and four Ⓚ screws. Also install the two Ⓘ clips (Figure 4).

- Make sure that the rough surface of back panel Ⓒ is facing towards the back of the stand.
- Start with the four Ⓚ screws on the left and right, and then install the four Ⓗ screws. When installing the two screws marked ❺ in Figure 4, pass the screws through the holes in the Ⓘ clips and then screw the screws into place on the stand.

5. Rotate height adjustment screw Ⓖ until it supports crosspiece Ⓓ, preventing the crosspiece from bending when you press the pedals (Figure 5).

Important!

Be sure to install adjustment screw Ⓖ and perform the adjustment procedure described above before depressing the pedals. Failure to do so can result in damage to crosspiece Ⓓ.

Figure 3

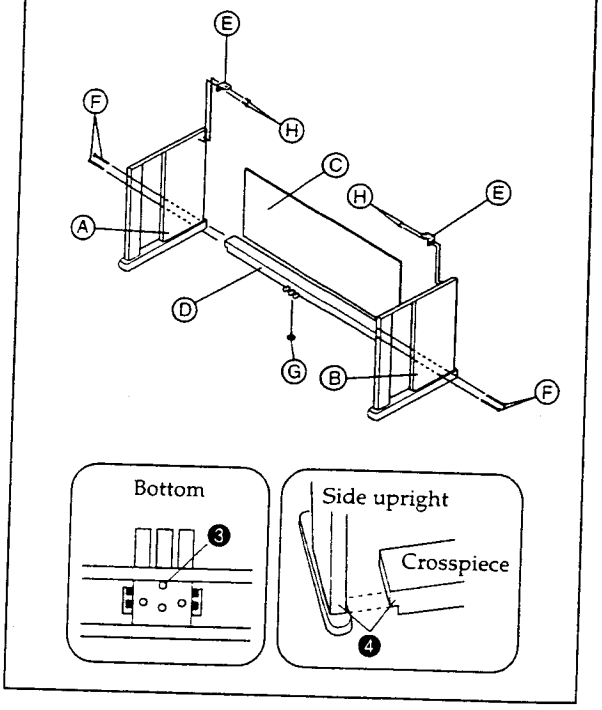


Figure 4

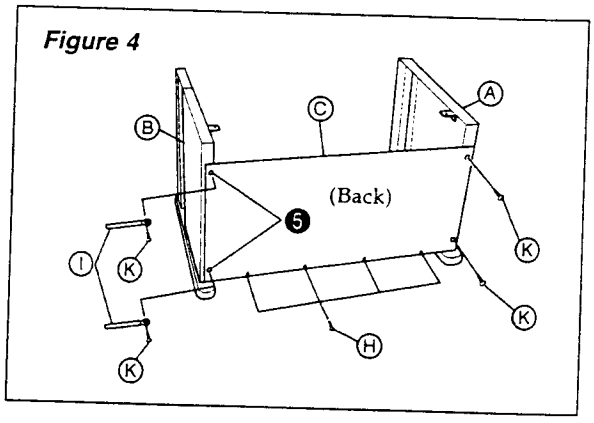
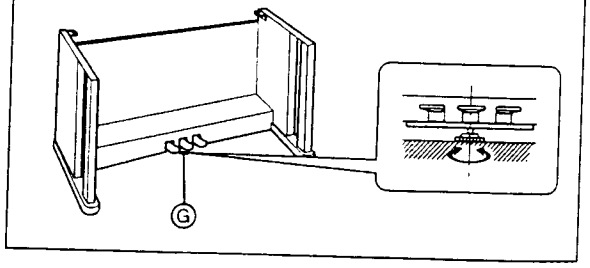


Figure 5



2 Installing the Piano onto the Stand

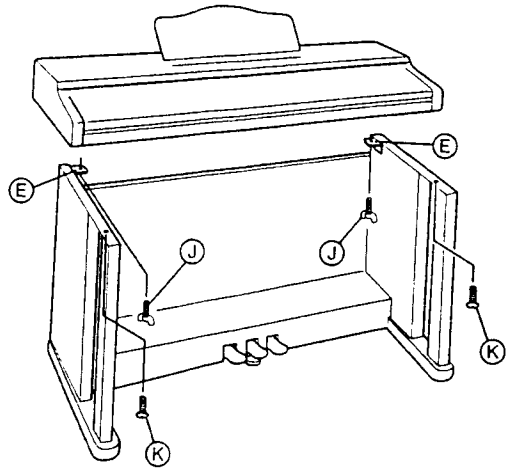
Caution!

- Take care that you do not pinch your fingers between the keyboard and stand!

Be sure that you securely anchor the keyboard to the stand using two Ⓙ butterfly bolts and two Ⓚ screws. (Figure 6).

- Position the piano so the two rubber feet on its bottom (at the two back corners) are behind (more towards the back of the stand than) the stand's two rear angle brackets Ⓔ. In this position, the bolt holes in the bottom of the piano will be correctly aligned with the bolt holes of the stand's angle brackets.
- The butterfly bolts keep the piano from falling from the stand. Be sure that you always secure the keyboard with the butterfly bolts.

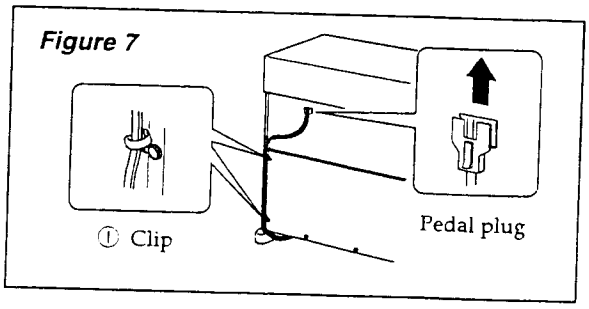
Figure 6



3 Connecting the Pedal

Position the pedal plug as shown in Figure 7 and insert it into the PEDAL connector on the back of the piano. Secure the pedal cable to the upright of the stand using the ⓘ clips that you installed when assembling the stand.

Figure 7



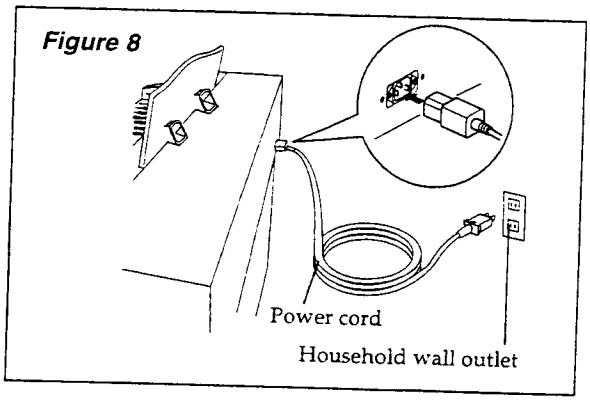
4 Connecting to a Power Supply

1. Check to make sure that the piano's POWER button is in the OFF position. If it is ON, press the button to switch it OFF.
2. Attach the power cord that comes with the piano to the back of the piano.
3. Plug the piano's power cord into a wall outlet (Figure 8).

Important!

The shapes of the piano's power cord and wall outlet differ according to countries or regions. The illustrations are examples.

Figure 8



Caution!

- The screw that you use to assemble the stand may become loose after a long period due to changes in temperature and humidity, vibration caused by normal use, etc. Periodically check the screws used to fasten the stand and the butterfly bolts used to fasten the stand and the piano, and tighten them whenever necessary.

Specifications

Model:	AP-22S/AP-40
Keyboard:	88 piano keys (with touch response)
Polyphony:	32 notes, maximum
Tones:	• 10 (including two bass tones) • Tuning Curves: 3 (preset for each tone) • Layer: Adjustable volume • Split: Split point, adjustable volume
Digital Effects:	Reverb (4 types), Chorus, Tremolo, Brilliance
Demo Tunes:	• Number of Tunes: 8 • Playback: Repeat (all tunes, one tune)
Memory:	• Operations: Real-time recording, playback • Number of Tracks: 2 (Track A, Track B) • Capacity: Approximately 5,000 notes (total of 2 tracks) • Memory Backup: Built-in lithium battery (Battery Life: 5 years)
Song Lesson:	• Number of Tunes: 80 • Playback: All song repeat, specific song • Part Off: L, R • Phrase Repeat
Pedals:	Damper, Soft, Sostenuto
Other Functions:	• Metronome: Beat (6 types), Tempo (♩ = 30 to 300) • Touch Select: 3 types • Transpose: 1 octave (F♯ to C to F) • Tuning: A4 = 440Hz ±13Hz (adjustable) • Temperament: 7 types • Baroque pitch
MIDI:	16 multi-timbre receive
Input/Output:	• Headphones: Stereo standard jacks x 2 • LINE OUT (R)(L): Monaural standard jacks x 2 Output impedance: 22KΩ Output voltage: 2.0V (RMS) MAX • LINE IN (R)(L): Monaural standard jacks x 2 Input impedance: 30KΩ Input voltage: 200mV • MIDI (OUT) (IN)
Speakers:	Ø 16cm x 2, Ø 5cm x 2 (Output: 30W + 30W)
Power Supply:	120V (for U.S.A.), 120V, 220V, 230V and 240V (for other countries) AC household current via AC power cord supplied with piano.
Power Consumption:	70W (with 120V AC), 90W (with 220V, 230V and 240V AC)
Dimensions:	• CELVIANO Only: 139.0 × 54.0 × 24.9 cm (54 3/4 × 21 1/4 × 9 13/16 inch) • CELVIANO and Stand: 139.0 × 54.0 × 88.4 cm (54 3/4 × 21 1/4 × 34 13/16 inch)
Weight:	• CELVIANO Only: approximately 48.5kg (107.1 lbs) • CELVIANO and Stand: approximately 60.2kg (132.9 lbs) (AP-22S) approximately 63.6kg (140.4 lbs) (AP-40)

• *Design and specifications are subject to change without notice.*

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